G.B.C.

POST-SECONDARY PROGRAMS 1977/78-1978/79

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The George Brown College

Post-Secondary Programs

1977-1978

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S1.6

POST-SECONDARY PROGRAMS

1977-1978

For information, phone 967-1212

The George Brown College of Applied Arts and Technology

P.O. Box 1015, Station B, Toronto, Ontario, M5T 2T9 (416) 967-1212

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General Information

ADMISSION PROCEDURES

Secondary school students intending to enter the George Brown College are advised to consult, during the fall term, with a guidance counsellor, who will supply information and application forms.

Application forms must be accompanied by ONE of the following documents:

(i) An official transcript of all secondary school marks, showing the necessary credits and grades for admission to the desired program.
OR
(ii) A statement from the secondary school principal stating that the applicant is expected to obtain the necessary credits and grades for admission to the desired program; this statement must be substantiated by an official transcript of marks, when it becomes available.

The general public may obtain information and application forms by writing to the George Brown College, P.O. Box 1015, Station B, Toronto, Ontario, M5T 2T9, or by telephoning 967-1212 and asking for "Information".

MATURE STUDENTS

Persons nineteen years of age or older, who do not have the stated admission qualifications but who appear to possess the capacity and maturity to succeed are eligible to apply. This category is not open to overseas students.

ADMISSION REQUIREMENTS

The basic admission requirement to post-secondary programs is Ontario high school graduation (27 credits) or equivalent; certain programs, however, require personal interviews or Grade 12 standing in specific subjects or demonstration of special talents.

PRIORITY OF ADMISSIONS

Students will be admitted in the following order of preference:
1. Permanent residents of Ontario
2. Permanent residents of other Canadian provinces
3. Overseas students from Commonwealth countries
4. Students from other foreign countries

STUDENTS FROM FOREIGN COUNTRIES

Students other than Canadian citizens and landed immigrants are not eligible for apprenticeship programs or Ontario Manpower Retraining Programs. (Grade 10 or less entry.)

Students from foreign countries are eligible for post-secondary programs, provided they can demonstrate an academic standing equivalent to the Ontario Grade 12, establish proficiency in both spoken and written English, fulfill any selective admission criteria for the program for which application is being made, and obtain permission from the Canadian immigration authorities to remain in the country for the length of the program.

DECISION ON ADMISSIONS

Applications are assessed by a Board of Admissions, which is empowered to accept, defer, or reject any candidate's application for admission to any program. The George Brown College reserves the right to cancel a course, when enrolment is insufficient, or employment opportunities appear inadequate.

***FEES**

(i) **Post-Secondary Programs**

Confirmation fee	**$ 50.00**
First semester	
Balance of tuition fee	$140.00
Laboratory/Equipment fee	15.00
Student activity fee	20.00
	$175.00
Second semester	
Tuition fee	$145.00
Laboratory/Equipment fee	15.00
Student activity fee	15.00
	$175.00

The Confirmation fee of $50, which includes a $10 registration fee, must be paid within three weeks after notice of acceptance to guarantee a place in the program; it is not refundable, but is credited as a portion of the total fees.

The balance of the first semester tuition fee must be paid at the time of registration; the second semester fee must be paid in full before the end of the first semester.

Applicants from foreign countries must pay total fees of $825.00 which must be paid in full no later than two months before registration date, i.e. by July 1 for September registration and by November 1 for January registration.

The cost of textbooks, instruments and supplies is additional to the tuition fee and varies according to the program, from $40 to $100. Students are invited to use the facilities of the campus bookstore.

(ii) Ontario Manpower Retraining Programs
Applicants eligible for these programs will

pay fees in advance at the rate of $7.50 per week, in instalments covering not less than one month at a time; these fees are not refundable.

Cheques and money orders for fees should be made payable to the George Brown College.

* The above fees were in effect at the time of publication; they are subject to change at any time without notice.

FINANCIAL ASSISTANCE

Applicants for admission to a post-secondary program, who are Canadian citizens or landed immigrants having resided in the country for at least 12 consecutive months prior to enrolment, may be eligible for financial assistance under the terms of the Ontario Student Assistance Program or of the Canada Student Loans Plan.

Further information and application forms for student financial assistance are available at all secondary schools and the Student Services Office of the George Brown College, telephone 967-1212.

SERVICES

- ACCOMMODATION information is available at the Administration Building, 500 MacPherson Avenue. Although residence accommodation is not provided by the College, there is no shortage of boarding and rooming facilities in Toronto; rates vary from $38 to $40 per week for room and board.
- COUNSELLING SERVICES are available on each campus to provide educational, vocational, and personal counselling.
- HEALTH CENTRES are staffed by Public Health Nurses, with a physician available for consultation on an appointment basis; services include individual health counselling, health education programs and emergency care in the case of accident or illness.
- LIBRARIES providing for study needs and leisure reading, operate on each campus.
- OHIP (Ontario Hospital Insurance Plan) coverage is the responsibility of each student; information is available at each Campus Health Centre.
- PLACEMENT ASSISTANCE is provided to all students by Divisional Faculty and Staff. The Placement Office provides career planning and employment search information and maintains contact with potential employers on behalf of graduates.
  Students are advised of permanent, part-time and summer employment opportunities.
- TRANSPORTATION on the GO trains is available at reduced rates for students in full-time attendance for more than 12 consecutive weeks; further information may be obtained by telephoning (416) 248-3112.
- ATHLETIC activities are co-ordinated fro the office at the Casa Loma Campus gym nasium. Information about the programs ca be obtained by telephoning 967-1212 ex 431.

Casa Loma

ir Conditioning GBC Code: AR101
echnician

ocation: Casa Loma
ength: 4 Semesters
ertification: Diploma
rerequisites: Ontario Secondary School raduation Diploma with credits in mathe-atics in years three and four at, or above the eneral level, or equivalent.

During the last decade air conditioning has eveloped into one of Canada's fastest growing ndustries. By pioneering specialized systems eat heat, cool, humidify, circulate, filter and urify, it has contributed to achievements nging from space travel to solar heating.
The student will gain a very broad and tensive knowledge of the design, installation nd operation of air conditioning systems in sidential, commercial and industrial build-gs. Well equipped laboratories are provided reinforce the practical aspects of the subject atter.
Graduates have the academic qualification r certification at the Senior Engineering echnician level by the Ontario Association of ertified Engineering Technicians and Tech-ologists.

ROGRAM ROUTE: 1

Semester 1 — 15 weeks

urse		Course Title	Total Hours
R	100	Refrigeration	150.0
A	105	Air Conditioning	105.0
R	108	Instrumentation	30.0
R	109	Electrical Fundamentals	45.0
RDR	124	Drafting	30.0
ATH	106	Mathematics	45.0
Y	106	Applied Physics	30.0
ELD	149	Welding Brazing & Cutting	30.0
			465.0

Semester 2 — 17 weeks

urse		Course Title	Total Hours
R	105	Air Conditioning	119.0
R	109	Electrical Fundamentals	51.0
RDR	124	Drafting	34.0
ATH	106	Mathematics	51.0
Y	106	Applied Physics	34.0
	104	Heating	136.0
R	107	Hydronic Heating	34.0
NG	100	Language and Communications	68.0
			527.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
HT	114	Heating	75.0
AIR	203	Air Conditioning Systems	135.0
AIR	201	Automatic Controls	45.0
ARDR	232	Drafting	60.0
PHY	202	Physics (Thermodynamics)	30.0
ENG	200	Language and Communications	30.0
MATH	206	Mathematics	45.0
MATH	120	Applied Computer Programming	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
AIR	203	Air Conditioning Systems	153.0
AIR	201	Automatic Controls	51.0
PHY	202	Physics (Thermodynamics)	34.0
MATH	206	Mathematics	51.0
ENG	200	Language and Communications	34.0
AIR	200	Refrigeration	119.0
AIR	106	Estimating for Air Conditioning	68.0
			510.0

Civil Engineering Technician GBC code: AR110

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Background: Credits in physics, drafting and surveying are desirable.

The two-year Civil Engineering Program prepares the student to seek a career in the design, planning or construction of civil engineering projects.

During the instruction periods, particularly in the technical subjects the instructors use the project approach to reinforce the theoretical and practical aspects of engineering. This method utilizing well-equipped laboratories for the testing and control of the major construction materials helps to familiarize the student with industry's approach to the subject area.

Graduates are eligible for certification in the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
SURV	104	Plane Surveying	90.0
CIV	101	Engineering Drawing and Design	90.0
CIV	103	Construction Materials	45.0
CIV	104	Specification and Estimating	30.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
			420.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
SURV	104	Plane Surveying	102.0
CIV	101	Engineering Drawing and Design	102.0
CIV	103	Construction Materials	51.0
CIV	104	Specification and Estimating	34.0
MATH	100	Mathematics	68.0
ENG	100	Language and Communications	34.0
PHY	100	Applied Physics	85.0
			476.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
CIV	200	Structural Drawing and Design	60.0
CIV	202	Municipal Services	45.0
CIV	203	Highway Technology	75.0
CIV	204	Specifications and Estimating	30.0
SURV	201	Advanced Plane Surveying	90.0
MATH	120	Applied Computer Programming	30.0
MATH	200	Mathematics	60.0
ENG	200	Language and Communications	30.0
MECH	110	Mechanics of Materials	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
CIV	200	Structural Drawing and Design	68.0
CIV	202	Municipal Services	51.0
CIV	203	Highway Technology	85.0
CIV	204	Specifications and Estimating	34.0
SURV	201	Advanced Plane Surveying	10
MATH	220	Applied Computer Programming	3
MATH	200	Mathematics	6
ENG	200	Language and Communications	3
MECH	110	Mechanics of Materials	3
			51

Construction Technician GBC code: AR

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Sch
Graduation Diploma with credits
mathematics in years 3 and 4 at, or above
general level, or equivalent.

Background: Credits in Physics, Drafting
Bookkeeping would be useful as backgrou

The two-year Construction Technic
Program prepares the student to enter the c
struction industry in various capacities lead
to positions such as estimators, expediti
field engineers and superintendents, build
inspectors, building product sales and othe

Instructors use the project approach
learning to reinforce the theoretical and pra
cal parts of the program. In this way, the
dent is made familiar with industry's methods
working. Well equipped laboratories are ava
ble for the testing and quality control of vari
construction materials and components.

Graduates are eligible for certification in
Ontario Association of Certified Engineer
Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	To Ho
CO	100	Building Construction	4
CO	101	Quantity Surveying I	7
CO	102	Mechanical Installations I	4
CO	103	Construction Materials	6
CO	104	Site Engineering	6
MATH	100	Mathematics	6
ENG	100	Language and Communications	3
MECH	100	Mechanics	7
			45

Semester 2 — 17 weeks

Course		Course Title	To Ho
CO	100	Building Construction	8
CO	101	Quantity Surveying I	11
CO	102	Mechanical Installations I	5
CO	103	Construction Materials	68.0
MATH	100	Mathematics	68.0
ENG	100	Language and Communications	34.0
PHY	100	Applied Physics	85.0
			510.0

Semester 3 — 17 weeks

Course		Course Title	Total Hours
CO	216	Site Engineering	60.0
CO	200	Building Construction	45.0
CO	201	Quantity Surveying II	45.0
CO	202	Mechanical Installations II	60.0
CO	210	Contracts and Specifications	60.0
MATH	200	Mathematics	60.0
ENG	200	Language and Communications	30.0
EC	104	Economics	60.0
MECH	110	Mechanics of Materials	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
CO	200	Building Construction	68.0
CO	201	Quantity Surveying II	85.0
CO	202	Mechanical Installations II	68.0
CO	210	Contracts and Specifications	68.0
MATH	200	Mathematics	68.0
ENG	200	Language and Communications	34.0
EC	104	Economics	68.0
MECH	110	Mechanics of Materials	34.0
			493.0

Drafting Technician GBC code: AR104
Architectural

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

The architectural drafting technician is one of a team of technical personnel involved in the construction industry. Graduates of this two-year program play a significant role as detail draftspersons, field supervisors, sales consultants and expeditors in architectural, engineering and fabrication firms, government and municipal offices.

Office atmosphere is simulated by grouping students and using actual building projects from industry. Job site visits, guest speakers, specifications, mechanical and electrical information are arranged to give the student a complete understanding of an actual "living" project.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ARCH	100	Materials and Methods	30.0
ARDR	102	Architectural Drafting I	135.0
ARDR	120	Descriptive Geometry I	30.0
SURV	110	Surveying	45.0
MATH	109	Mathematics	45.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
ARCH	101	Codes and Regulations	15.0
ARDR	103	Architectural Rendering and Presentation	30.0
			435.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
ARCH	100	Materials and Methods	34.0
ARDR	102	Architectural Drafting I	153.0
ARDR	120	Descriptive Geometry I	34.0
MATH	109	Mathematics	51.0
ENG	100	Language and Communications	34.0
EC	100	Economics	68.0
PHY	100	Applied Physics	85.0
ARDR	103	Architectural Rendering and Presentation	34.0
ARCH	101	Codes and Regulations	17.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ARCH	200	Materials and Methods	30.0
ARDR	111	Mechanical Installations Drafting I	45.0
ARDR	202	Architectural Drafting II	120.0
ARDR	220	Descriptive Geometry II	60.0
MATH	209	Mathematics	45.0
ENG	200	Language and Communications	30.0
MECH	110	Mechanics of Materials	60.0
MATH	120	Applied Computer Programming	30.0
ARDR	104	Architectural Design and Planning	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ARCH	200	Materials and Methods	34.0
ARDR	111	Mechanical Installations Drafting I	51.0
ARDR	202	Architectural Drafting II	126.0
MATH	209	Mathematics	51.0
ENG	200	Language and Communications	34.0
SURV	102	Quantity Surveying I	68.0
ARDR	115	Structural Drafting	68.0
ARDR	104	Architectural Design and Planning	34.0
			466.0

Drafting Technician GBC code: AR105
General

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

The objective of the program is to prepare the student for employment in one of a variety of drafting fields by teaching the related theory of construction, manufacturing and accepted practice as well as developing drafting skill. Architectural, mechanical services, survey and structural drafting are taught.

The drafting classes are conducted as a drawing office. The theory of the construction is introduced and studied in relation to its application in drawing. Projects are developed from simple basic forms by applying knowledge gained from lecture and demonstration. The student progresses to more complex working drawings combined with continued practice of drawing skill and added knowledge.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ARDR	112	Drafting	120.0
SURV	100	Survey Computation and Drafting I	60.0
ARDR	154	Art and Presentation	30.0
ARCH	100	Materials and Methods	30.0
MATH	109	Mathematics	45.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
ARDR	120	Descriptive Geometry I	30.0
			420.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
SURV	100	Survey Computation and Drafting I	68.0
ARDR	154	Art and Presentation	34.0
ARCH	100	Materials and Methods	34.0
MATH	109	Mathematics	51.0
ENG	100	Language and Communications	34.0
ARDR	102	Architectural Drafting I	170.0
ARDR	120	Descriptive Geometry I	34.0
			425.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ARDR	202	Architectural Drafting II	120.0
MATH	209	Mathematics	45.0
ENG	200	Language and Communications	30.0
ARDR	108	Structural Drafting I	75.0
ARCH	200	Materials and Methods	30.0
STR	123	Structural Design	45.0
ARDR	111	Mechanical Installations Drafting I	45.0
MECH	110	Mechanics of Materials	60.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ARDR	202	Architectural Drafting II	136.0
MATH	209	Mathematics	51.0
ENG	200	Language and Communications	34.0
ARDR	108	Structural Drafting I	85.0
STR	123	Structural Design	51.0
PHY	100	Applied Physics	68.0
ARDR	111	Mechanical Installations Drafting I	51.0
ARCH	200	Materials and Methods	34.0
			510.0

Mechanical Drafting GBC code: AR112
Design Technician

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Background: Credits in drafting and physics are desirable.

This program has been developed to prepare

student for a career in a wide range of drafting and design areas.
The theoretical and practical aspects of the subject matter are applied to the drawing and design of projects in a modern drafting room, using up-to-date equipment which simulates actual industrial engineering office.
Graduates are eligible for certification by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
DR	118	Descriptive Geometry	60.0
DR	158	Drafting and Design	180.0
TH	100	Mathematics	60.0
G	100	Language and Communications	30.0
CH	100	Mechanics	45.0
T	100	Metallurgy	30.0
CH	110	Workshop Technology	60.0
			465.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
DR	102	Machine Drawing and Design	170.0
DR	118	Descriptive Geometry	68.0
TH	100	Mathematics	68.0
G	100	Language and Communications	34.0
CH	100	Mechanics	34.0
T	100	Metallurgy	34.0
DR	107	Kinematics	34.0
CH	110	Workshop Technology	68.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
DR	201	Drawing and Product Design	150.0
DR	107	Kinematics	30.0
DR	222	Descriptive Geometry	60.0
TH	200	Mathematics	60.0
CH	110	Mechanics of Materials	30.0
	100	Metrology	60.0
G	200	Language and Communications	30.0
DR	202	Manufacturing Processes	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ENDR	201	Drawing and Product Design	170.0
ENDR	107	Kinematics	34.0
ENDR	222	Descriptive Geometry	68.0
EL	305	Machine Circuits and Apparatus	68.0
ENDR	241	Tool Design Theory	34.0
MATH	200	Mathematics	68.0
MECH	110	Mechanics of Materials	34.0
ENG	200	Language and Communications	34.0
			510.0

Survey Technician GBC code: AR102

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Surveying is the science of measuring and recording the geometrical and physical features of our environment.

Young men and women can find challenging careers in this area whether it is doing exploration surveys, laying out new sub-divisions or compiling information and calculations into a finished plan for urban study.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
SURV	106	Survey Computation	75.0
SURV	101	Plane surveying	120.0
MATH	100	Mathematics	75.0
ENG	100	Language and Communications	30.0
SURV	107	Survey Drafting	60.0
GEO	100	Forestry & Geology	45.0
PHY	102	Applied Physics	45.0
			450.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
SURV	106	Survey Computation	85.0
SURV	101	Plane Surveying	136.0
MATH	100	Mathematics	85.0
ENG	100	Language and Communications	34.0

SURV	107	Survey Drafting	68.0
GEO	100	Forestry & Geology	51.0
PHY	102	Applied Physics	51.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
CIV	202	Municipal Services	60.0
SURV	200	Survey Computations II	90.0
SURV	208	Advanced Plane Surveying	120.0
SURV	209	Spherical Trigonometry & Astronomy	30.0
SURV	204	Legal Surveying	30.0
MATH	203	Mathematics	75.0
CIV	106	Land Division	45.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
CIV	202	Municipal Services	68.0
SURV	200	Survey Computations II	102.0
SURV	208	Advanced Plane Surveying	136.0
SURV	202	Photogrammetry	34.0
SURV	204	Legal Surveying	34.0
MATH	203	Mathematics	85.0
CIV	106	Land Division	51.0
			510.0

Survey Technologist GBC code: AR106

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with high standing in mathematics in years three and four at or above the general level.

Background: Credits in physics, drafting and surveying are desirable.

Surveying is the science of measuring and recording the geometrical and physical features of our environment.

Young men and women can find challenging careers in this area whether it is doing exploration surveys, laying out new sub-divisions or compiling information and calculations into a finished plan for urban study.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
SURV	107	Survey Drafting	60.0
SURV	106	Survey Computation	75.0
SURV	101	Plane Surveying	60.0
MATH	101T	Mathematics	60.0
ENG	100	Language and Communications	30.0
GEO	100	Forestry & Geology	30.0
PHY	102	Applied Physics	45.0
			360.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
SURV	107	Survey Drafting	60.0
SURV	106	Survey Computation	75.0
SURV	101	Plane Surveying	60.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
GEO	100	Forestry & Geology	30.0
PHY	102	Applied Physics	45.0
			360.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ARDR	221	Descriptive Geometry	60.0
SURV	200T	Survey Computations and Drafting	90.0
SURV	201T	Advanced Plane Surveying	90.0
MATH	200T	Mathematics	60.0
ENG	200	Language and Communications	30.0
EL	130	Electrical Fundamentals	60.0
			390.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
CIV	106	Land Division	60.0
CIV	202	Municipal Services	60.0
SURV	200	Survey Computations II	90.0
SURV	208	Advanced Plane Surveying	120.0
SURV	209	Spherical Trigonometry & Astronomy	30.0
SURV	204	Legal Surveying	30.0
MATH	203	Mathematics	75.0
			465.0

Semester 5 — 15 weeks

Course		Course Title	Total Hours
CIV	106	Land Division	60.0
CIV	202	Municipal Services	60.0
SURV	200	Survey Computations II	90.0
SURV	208	Advanced Plane Surveying	120.0
SURV	202	Photogrammetry	30.0
SURV	204	Legal Surveying	30.0
MATH	203	Mathematics	75.0
			450.0

Semester 6 — 15 weeks

Course		Course Title	Total Hours
CIV	202	Municipal Services	60.0
SURV	300T	Cartography	90.0
SURV	301T	Advanced Plane Surveying	90.0
SURV	302T	Photogrammetry	45.0
SURV	303T	Practical Astronomy	30.0
SURV	304T	Legal Surveying	30.0
MATH	301T	Mathematics (Matrices)	75.0
ENG	332	Business Communication	30.0
			450.0

ool & Die GBC code: AR111
esign Technician

ocation: Casa Loma
ength: 4 Semesters
ertification: Diploma
erequisites: Ontario Secondary School raduation Diploma with credits in athematics in years three and four at or above e general level, or equivalent.

ackground: Credits in drafting and machine op practice would be advantageous.

The tool and die design technician works in e drawing and design offices of manufactur- companies. The tool designer helps decide e various ways products are to be manufac- ured, develops the manufacturing sequence d decides what tooling is needed to make ch part, and creates the designs for special ols such as jibs, fixtures and dies which play ital role in modern manufacturing practice. This two-year program is divided into four mesters which cover the theoretical and actical aspects of tool design. The student ll be stationed at one of the design tables in e design office. This practical approach is the me as would be encountered in industry. The ll equipped design office and library, give the dent a realistic environment in which to velop skills, an up-to-date machine shop is ailable to test the practicality of designs veloped in the design office.

Graduates are eligible for certification by the ntario Association of Certified Engineering chnicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ENDR	118	Descriptive Geometry	60.0
ENDR	158	Drafting and Design	180.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	45.0
MET	100	Metallurgy	30.0
MACH	110	Workshop Technology	60.0
			465.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
ENDR	118	Descriptive Geometry	68.0
ENDR	130	Jig and Fixture Design	170.0
MATH	100	Mathematics	68.0
MECH	100	Mechanics	34.0
ENG	100	Language and Communications	34.0
MET	100	Metallurgy	34.0
MACH	110	Workshop Technology	68.0
ENDR	107	Kinematics	34.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ENDR	140	Die Design	150.0
ENDR	107	Kinematics	30.0
TD	100	Metrology	60.0
MATH	200	Mathematics	60.0
MECH	110	Mechanics of Materials	30.0
ENG	200	Language and Communications	30.0
ENDR	222	Descriptive Geometry	60.0
ENDR	202	Manufacturing Processes	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ENDR	340	Die Design	170.0
ENDR	241	Tool Design Theory	34.0
ENDR	107	Kinematics	34.0
EL	305	Machine Circuits and Apparatus	68.0
MATH	200	Mathematics	68.0
MECH	110	Mechanics of Materials	34.0
ENG	200	Language and Communications	34.0
ENDR	222	Descriptive Geometry	68.0
			510.0

Toolmaking Technician GBC code: EN104

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: Credits in machine shop are desirable.

Graduates of the two-year Toolmaking Technician program can look forward to a career in the modern production process, one that demands skill, application, accuracy and cost-consciousness.

Instruction combines theoretical and practical training in toolmaking and related subjects in well-equipped machine shops and laboratories.

Graduates are eligible for certification by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
ENDR	134	Tool Design (Jig and Fixtures)	64.0
MACH	120	Toolmaking	224.0
NC	126	Numerical Control	48.0
PM	110	Precision Measurement	32.0
MATH	100	Mathematics	64.0
MECH	100	Mechanics	48.0
ENG	100	Language and Communications	32.0
			512.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ENDR	134	Tool Design (Jig and Fixtures)	64.0
MACH	120	Toolmaking	224.0
NC	126	Numerical Control	48.0
MET	100	Metallurgy	32.0
MATH	100	Mathematics	64.0
MECH	100	Mechanics	32.0
ENG	100	Language and Communications	32.0
			496.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
ENDR	242	Die Design	64.0
MACH	204	Diemaking	2
NC	208	Numerical Control	
MET	100	Metallurgy	
MATH	200	Mathematics	
MECH	110	Mechanics of Materials	
ED	100	Fundamentals of Supervision	4

Semester 4 — 16 weeks

Course		Course Title	H
ENDR	242	Die Design	
MACH	204	Diemaking	2
NC	208	Numerical Control	
PM	110	Precision Measurement	
MATH	200	Mathematics	
MECH	110	Mechanics of Materials	
ED	100	Fundamentals of Supervision	4

Welding Specialist GBC code: EN

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary Sc
Graduation Diploma with credits in years 3
4 at or above the general level including y
mathematics and English, year 3 physic
equivalent with one of the following:—
A) Specialization in welding in a Secon
School.
B) Successful completion of a Welding F
program in a College of Applied Arts
Technology.
C) Approved industrial experience.

This program combines practical instruc
in well-equipped shops and laboratories
complementary coverage of theory
selected related areas required for a
range of welding-related occupatio
Emphasis is placed on the selection, operat
trouble shooting and industrial applicatio
manual, semi-automatic and fully autom
welding equipment. A successful graduate
have a sound background in weld inspect
quality control, production procedures
metallurgical principles along with a varie
manipulative welding skills.

PROGRAM ROUTE: 1

Semester 1 — 20 weeks

Course		Course Title	T
WELD	100	Shielded Metal Arc & Oxy-Acetylene Welding	H
WELD	101	Gas Tungsten Arc Welding	40.0
WELD	102	Gas Metal Arc Fluxed Cored & Submerged Arc	80.0
WELD	103	Shop & Laboratory	140.0
MET	100	Metallurgy	40.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	40.0
EL	200	Electric Fundamentals	40.0
ENDR	119	Technical Drawing	40.0
ENDR	118	Descriptive Geometry	40.0
			600.0

Semester 2 — 20 weeks

Course		Course Title	Total Hours
WELD	100	Shielded Metal Arc & Oxy-Acetylene Welding	80.0
WELD	101	Gas Tungsten Arc Welding	40.0
WELD	102	Gas Metal Arc Fluxed Cored & Submerged Arc	80.0
WELD	103	Shop & Laboratory Procedures	140.0
MET	100	Metallurgy	40.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	40.0
EL	200	Electric Fundamentals	40.0
ENDR	118	Descriptive Geometry	40.0
ENDR	119	Technical Drawing	40.0
			600.0

Design GBC code: EL101
Technician-Electrical

Location: Casa Loma.
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: Credits in physics, electricity, and electronics would be useful as background.

Electrical design technicians work as electrical draftsmen, designers and estimators with engineering consultants, electrical utilities, electrical manufacturers and electrical contractors.

The Electrical Design Technician program is the same as the Electrical Technician program for the first three semesters (47 weeks) and then concentrates on the area of specialization for the final semester (17 weeks).

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals	50.0
ELTC	102A	Advanced Electronic Fundamentals	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ELTC	103	Amplifiers and Devices	50.0
EL	126A	Control of D/C Apparatus Laboratory	30.0
ELTC	111B	Applied Circuit Analysis II	32.0
ELDR	123	Electrical Drafting	64.0
EL	127A	Electrical Laboratory	96.0
ELTC	203	Computer Aided Design	32.0
ELTC	112C	Laboratory	48.0
ENG	100	Language and Communications	32.0
EL	121A	Direct Current Machines	60.0
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	111L	Applied Circuit Analysis Laboratory	16.0
			480.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ELDR	237	Electrical Drafting	60.0
EL	238	Electrical Laboratory	60.0
EL	242	Electrical Apparatus	90.0
EL	244	Wiring Methods and Code	45.0
ENG	200	Language and Communications	30.0
MATH	200	Mathematics	75.0
EL	234	Electrical Distribution Systems	60.0

EL	126B	Control of A.C. Apparatus Laboratory	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
EL	247	Electrical Design Applications	170.0
ELDR	248	Architectural & Mechanical Blueprint Reading	51.0
EL	249	Electrical Specification Writing	34.0
ENG	200	Language and Communications	34.0
MATH	200	Mathematics	68.0
EL	240	Installation and Branch Circuits	51.0
EL	235	Industrial Electronics	51.0
ENG	255	Technical Report	
			459.0

Electrical Technician GBC code: EL102

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: An electrical background is helpful but not essential.

George Brown's Electrical Technician program requires 32 weeks of training a year, for two years. Subjects covered include electrical fundamentals, D-C and A-C machines, industrial electronic controls, electrical drafting and related academic subjects.

Graduates will have the academic qualifications for certification in the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45
ELTC	111L	Applied Circuit Analysis Laboratory	15
ELTC	112A	Laboratory	135
ELDR	120	Drafting Fundamentals	45
ENG	100	Language and Communications	30
ELDR	120A	Drafting Fundamentals (Tutorial)	30
			480

Semester 2 — 16 weeks

Course		Course Title	Tot Hou
ELTC	103	Amplifiers and Devices	50
EL	126A	Control of D/C Apparatus Laboratory	30
ELTC	111B	Applied Circuit Analysis II	32
ELDR	123	Electrical Drafting	64
EL	127A	Electrical Laboratory	96
ELTC	203	Computer Aided Design	32
ELTC	112C	Laboratory	48
ENG	100	Language and Communications	32
EL	121A	Direct Current Machines	60
ELTC	102B	Electronic Fundamentals Advanced	20
ELTC	111L	Applied Circuit Analysis Laboratory	16
			480

Semester 3 — 15 weeks

Course		Course Title	Tot Hour
ELDR	237	Electrical Drafting	60
EL	238	Electrical Laboratory	60
EL	242	Electrical Apparatus	90
EL	244	Wiring Methods and Code	45
ENG	200	Language and Communications	30
MATH	200	Mathematics	75
EL	234	Electrical Distribution Systems	60
EL	126B	Control of A.C. Apparatus Laboratory	30
			450

Semester 4 — 17 weeks

Course		Course Title	Tot Hour
EL	241	Industrial Electronic Control Systems	170
ELDR	243	Electrical Drafting	68
EL	246	Electrical Laboratory	102
EL	250	Electrical Environmental Systems	51
ENG	200	Language and Communications	34

MATH	200	Mathematics	68.0
ENG	255	Technical Report	
			493.0

Electrical Technologist GBC code: EL106

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: An electrical background is helpful but not essential.

The Electrical Technology program is a continuation of the technician program. It combines both lectures, laboratory, and computer work which is aimed toward making the student able to work on his own with the guidance of his instructors, so that by the time he is ready to graduate he is capable of working independently.

Graduates from the technology program may become designers in a shorter time than technicians and using their design skills they may progress to management positions.

Graduates will have the academic qualifications for certification in the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ELTC	102C	Electronic Fundamentals — Advanced	52.0
ELTC	203	Computer Aided Design	28.0
ELTC	103T	Amplifiers & Devices	91.0
ELDR	123T	Electrical Drafting	64.0
ELTC	111T	Laboratory	16.0
EL	232T	Alternating Current Machines	65.0
EL	134T	Electrical Laboratory	35.0
ELTC	114	Laboratory	77.0
ENG	100	Language and Communications	28.0
MATH	102T	Mathematics	42.0
ELTC	111L	Applied Circuit Analysis Laboratory	16.0
			514.0

Semester 3 — 13 weeks

Course		Course Title	Total Hours
EL	121T	Direct Current Machines	52.0
EL	231T	Electrical Control Systems	65.0
EL	234T	Electrical Laboratory III B	78.0
ELDR	233T	Blueprint Reading	26.0
EL	125T	Electrical Laboratory II B	72.0
MATH	200T	Mathematics	52.0
ELDR	124T	Electrical Drafting	39.0
			384.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
EL	241T	Electrical Distribution Systems	75.0
EL	243T	Protection of Electrical Equipment	75.0
EL	244	Wiring Methods and Code	45.0
ELDR	237	Electrical Drafting	60.0
EL	246T	Electrical Laboratory	90.0
MATH	300	Mathematics	75.0
ENG	200	Language and Communications	30.0
EL	242T	Industrial Electronic Fundamentals	30.0
			480.0

Semester 5 — 13 weeks

Course		Course Title	Total Hours
EL	351	Industrial Electronic Control Systems	143.0

EL	352	Electrical Environmental Systems	52.0
ELDR	353	Electrical Drafting	52.0
EL	354	Electrical Laboratory	104.0
MATH	400	Mathematics	78.0
ENG	200	Language and Communications	26.0
ENG	255	Technical Report	
			455.0

Semester 6 — 13 weeks

Course		Course Title	Total Hours
EL	362	Electronic Instruments	52.0
EL	363	Closed Loop Controls	52.0
EL	364	Electrical Machine Design	104.0
EL	365	Electrical Estimating	52.0
PHY	200	Modern Physics	78.0
EC	100	Economics	65.0
ELTC	318	Advance Circuit Analysis	52.0
EL	366	Research Assignment	
			455.0

Jewellery Arts GBC code: FT102

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. Good eyesight, or corrected vision, is a prerequisite.

Background: The jeweller requires a high degree of manual dexterity, mechanical inclination, patience, initiative and artistic sense.

In the Jewellery Arts program, the student learns manufacturing and custom-design techniques by working with jewels and precious metals in one of four areas: goldsmithing, silversmithing, engraving, or gem-setting. Learning to visualize the properties of line, form and colour in three-dimensional objects is an integral part of the program.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
JWL	160	Introduction to Jewellery	110.0
MET	166	Metallurgy I	16.0
GEM	167	Gemmology I	32.0
CHEM	168	Chemistry I	16.0
DES	169	Design I	32.0
SBM	132	Small Business Management I	64.0
ENA	170	Enamelling I	48.0
AUD	300	Audit Relevant Courses—Course Projects	
RSCH	300	Research & Survey—Course Projects	
JWL	165	Theory of Specialty	
ELECT	000	Elective	

Semester 2 — 16 weeks

Course		Course Title
MET	176	Metallurgy II
GEM	177	Gemmology II
CHEM	168	Chemistry I
DES	179	Design for Jewellery Arts
SBM	142	Small Business Management II
ENA	180	Enamelling II
AUD	351	Audit Relevant Courses—Course Projects
RSCH	351	Research & Survey—Course Projects
JWL	175	Theory of Specialty
ELECT	000	Elective

Semester 3 — 16 weeks

Course		Course Title
MET	266	Metallurgy III
GEM	267	Gemmology III
DES	269	Design
ENA	270	Enamelling III
AUD	300	Audit Relevant Courses—Course Projects
RSCH	300	Research & Survey—Course Projects
JWL	265	Theory of Specialty
ELECT	000	Elective

Semester 4 — 16 weeks

Course		Course Title
MET	276	Metallurgy IV
GEM	277	Gemmology IV
DES	279	Design
ENA	280	Enamelling IV
AUD	351	Audit Relevant Courses—Course Projects
RSCH	351	Research & Survey—Course Projects
JWL	275	Theory of Specialty
ELECT	000	Elective

Semester 5 — 16 weeks

Course		Course Title	Total Hours
GEM	367	Gemmology	32.0
DES	369	Jewellery Design	32.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
JWL	365	Theory of Specialty	32.0
ELECT	000	Elective	304.0
			480.0

Semester 6 — 16 weeks

Course		Course Title	Total Hours
GEM	377	Gemmology	32.0
DES	379	Jewellery Design	32.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
JWL	375	Theory of Specialty	32.0
ELECT	000	Elective	304.0
			480.0

Jewellery Repairs GBC code: FT402

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Graduation from recognized two-year post-secondary Jewellery Arts program, or a mature person from industry who has been recommended by the Canadian Jewellery Institute. Good eyesight, or corrected vision is essential.

This post-graduate program provides a certificate with specialisation in the repair of all types of jewellery.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
JWL	465	Theory Repairs	32.0
JWL	466	Shop	288.0
GEM	467	Gemmology	32.0
DES	469	Design	48.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
JWL	475	Theory Repairs	32.0
JWL	476	Jewellery Repairs	288.0
GEM	477	Gemmology	32.0
DES	479	Design	48.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
			480.0

PROGRAM ROUTE: 2

Semester 1 — 16 weeks
For Jewellers from Industry

Course		Course Title	Total Hours
JWL	465	Theory Repairs	32.0
JWL	466B	Shop	160.0
GEM	467	Gemmology	32.0
DES	469	Design	48.0
JWL	436	Shop General Jewellery	64.0
MET	266	Metallurgy III	16.0
CHEM	168A	Chemistry II	16.0
SBM	132D	Small Business Man. For Jewellry Repairs	32.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
JWL	475	Theory Repairs	32.0
JWL	476B	Jewellery Repairs	160.0
GEM	477	Gemmology	32.0
DES	479	Design	48.0
JWL	446	Shop General Jewellery	64.0
MET	276	Metallurgy IV	16.0
CHEM	168B	Chemistry II	16.0
SBM	142	Small Business Management II	32.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
			480.0

Watchmaking GBC code: FT111

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background: Any hobby involving work with small mechanisms would be beneficial. Good eyesight (corrected vision is accepted), and mechanical reasoning abilities are essential.

The basic two-year program in watchmaking prepares the student to service, repair and manufacture all types of mechanical time pieces except chronographs.

After completion of the two-year program the student may qualify to enter an optional third-year to learn how to service all types of complex watch mechanisms including electric and electronic watches (under review).

Instruction is by the project approach for the first three semesters, and a simulated repair shop approach during the fourth, fifth and sixth semester. The college provides the most modern equipment and small tools during the training period. Related horological theory is taught parallel to shop practices.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
WACH	127A	Hairspring Manipulation	57.0
WACH	128A	Filing	76.0
WACH	129A	Lathe Operations	133.0
WACH	131A	Watchmaking Theory	95.0
MET	130A	Metallurgy I	38.0
SBM	132B	Small Business Management—Watchmakers	38.0
ENG	100A	Language and Communications	38.0
AUD	350	Audit Relevant Courses	57.0
RSCH	350	Research and Survey	38.0
			570.0

Semester 2 — 19 weeks

Course		Course Title	Total Hours
WACH	126B	Balance Work	95.0
WACH	127B	Hairspring Manipulation	95.0
WACH	128B	Filing	38.0
WACH	129B	Lathe Operations	38.0
WACH	131B	Watchmaking Skills	38.0
SBM	132C	Small Business Management—Watchmakers	95.0
MET	130	Metallurgy I	38.0
ENG	100	Language and Communications	38.0
AUD	351	Audit Relevant Courses—Course Projects	57.0
RSCH	351	Research & Survey—Course Projects	38.0
			570.0

Semester 3 — 19 weeks

Course		Course Title	Total Hours
WACH	227A	Balance and Hairspring Manipulation	133.0
WACH	231A	Watchmaking Skills	133.0
WACH	232A	Theory of Watchmaking	95
ENG	200A	Language and Communications	38
PHY	121	Physics	19
ENDR	143A	Drafting	57
AUD	300	Audit Relevant Courses—Course Projects	57
RSCH	300	Research & Survey—Course Projects	38
			570

Semester 4 — 19 weeks

Course		Course Title	Total Hours
WACH	224	Watch Overhaul	133
WACH	225	Escapement Matching	57
WACH	227B	Balance & Hairspring Manipulation	57
WACH	231B	Watchmaking Skills	38
WACH	232B	Theory of Watchmaking	95
EC	111	Economics	19
ENDR	143B	Drafting	57
ENG	200B	Language & Communications	38
AUD	351	Audit Relevant Courses—Course Projects	57
RSCH	351	Research & Survey—Course Projects	38
			570

Semester 5 — 19 weeks

Course		Course Title	Total Hours
WACH	331A	Lathe Operations	76
WACH	330	Horology Theory	57
WACH	334A	Watch Overhaul and Adjustment	38
WACH	335A	Applied Electronics	57
MATH	136A	Mathematics	57
AUD	300	Audit Relevant Courses—Course Projects	57
RSCH	300	Research & Survey—Course Projects	38
			570

Semester 6 — 19 weeks

Course		Course Title	Total Hours
WACH	331B	Lathe Operations	76
WACH	334B	Watch Overhaul	57
WACH	324	Chronograph Overhaul + Adjustment	57
WACH	336	Electronic Watch Servicing	114
WACH	330B	Horology Theory	76
WACH	335B	Applied Electronics	38
MATH	136B	Mathematics for Watchmakers	76
AUD	351	Audit Relevant Courses—Course Projects	57
RSCH	351	Research & Survey—Course Projects	38
			570

Dental Assisting GBC code: DE141

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in biology and chemistry in years 3 and 4 at, or above, the general level, or equivalent. In addition, candidates must provide proof of typing at 40 W.P.M., attend a selection interview, and undertake an aptitude test.

The certified dental assistant is trained to assist the dentist or other dental auxiliary in delivery of dental care to the public. In addition to administration skills and clinical roles the Certified Dental Assistant is trained to expose and develop dental radiographs.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ANAT	102	Dental Anatomy	30.0
DENT	106	Dental Materials	45.0
PCT	101	Pre-clinical Techniques	75.0
DENT	109	Radiology	45.0
BIO	102	Human Biology	30.0
PHAR	102	Pharmacology & Emergency Care	30.0
ENG	109	Language & Communications	45.0
ADM	100	Administration	15.0
PSY	100	Social Psychology	45.0
DENT	115	Orientation to Dentistry	30.0
			390.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
BIO	102	Human Biology	34.0
ADM	100	Administration	17.0
BIO	104	Microbiology	17.0
PATH	100	Oral Pathology "A"	17.0
NUT	101	Nutrition-A	17.0
DENT	104	Preventitive Dentistry-A	17.0
DENT	109	Radiology	17.0
ENG	109	Language & Communications	51.0
DENT	106	Dental Materials	34.0
PSY	100	Social Psychology	51.0
PCT	102	Clinical Techniques	170.0
			442.0

Dental Hygienist GBC code: DE142

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Applicants must be Certified Dental Assistants, and may be required to write a provincial selection examination and attend a selection interview.

The dental hygienist is trained to work with the patient under the general supervision of a dentist. Services provided to the patient are of a preventive nature.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ANAT	204	Anatomy — Head & Neck	45.0
HIST	100	Dental Histology & Embryology "A"	30.0
NUT	202	Nutrition — Biochemistry B	30.0
DENT	204	Preventive Dentistry — B	30.0
ENG	205	Language & Communications	30.0
PATH	200	Oral Pathology B	15.0
DENT	206	Dental Health Education	30.0
PCT	201	Pre-clinical techniques	180.0
DENT	116	Oral Examination	30.0
			420.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
NUT	203	Nutrition Counselling "C"	17.0
HIST	100	Dental Histology & Embryology "A"	17.0
PERI	100	Periodontics	34.0
ORTH	100	Orthodontics	17.0
PAED	100	Paedodontics	17.0
DENT	209	Advanced Radiography	10.0
BESC	101	Behavioural Science	51.0
PCT	203	Clinical Techniques	255.0
DENT	217	Community Dentistry	17.0
			435.0

Dental Hygiene (Expanded Duties) GBC code: DE400

Location: Casa Loma
Length: 1 Semester
Certification: Certificate
Prerequisites: Applicants must be graduates of a Dental Hygiene program and provide proof of Ontario certification. Candidates may have to write a provincial examination and attend a selection interview.

The Ontario government legislation describes the role of the expanded function

dental hygienist as a restorative dentistry assistant. This dental worker is capable of performing many tasks previously assigned only to a dentist. Included are such activities as placement and finishing of dental restorations, cementation of temporary crowns and some orthodontic procedures.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
CHEM	207	Chemistry & Science of Dental Materials	40.0
ORTH	400	Orthodontics	40.0
MED	100	Oral Medicine	40.0
HIST	400	Dental Histology & Embryology "B"	40.0
PCT	401	Pre-clinical techniques	180.0
PCT	402	Clinical Techniques	180.0
			520.0

Dental Technology GBC code: DE102

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma.
Prerequisites: Ontario Secondary School Graduation Diploma with credits in physics, chemistry and biology in years 3 and 4 at, or above, the general level, or equivalent. Applicants must attend a selection interview, take a manual dexterity test and undertake an aptitude test.

Background; Credit in the sciences beyond the grade XII level are recommended.

The dental technician makes a major contribution to the practice of dentistry. This dental worker fabricates all the various appliances used by the dentist in the treatment of patients.

The program at George Brown is the only one of its kind in the province. The teaching program is highly project oriented and there is a low student-instructor ratio which allows for much individual instruction throughout the program.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
BIO	107	Biology	30.0
ANAT	103	Dental Anatomy	30.0
ENG	110	Language & Communications	30.0
MATH	107	Mathematics	30.0
LAB	100	Dental Laboratory and Lecture	300.0
CHEM	107	Chemistry and Science of Dental Material	30
			450

Semester 2 — 17 weeks

Course		Course Title	Tota Hour
BIO	107	Biology	34
ANAT	103	Dental Anatomy	34
ENG	110	Language & Communications	34
MATH	107	Mathematics	34
LAB	100	Dental Laboratory and Lecture	306
CHEM	107	Chemistry and Science of Dental Material	34
DENT	101	Dental (Manipulation) Technology	34
			510

Semester 3 — 15 weeks

Course		Course Title	Tota Hou
CHEM	208	Chemistry of Dental Materials	30
EC	100	Economics	30
ENG	206	Language & Communications	30
PSY	200	Social Psychology	30
HR	200	Personnel Management	15
MET	200	Metallurgy	30
LAB	200	Dental Laboratory and Lecture	300
			465

Semester 4 — 17 weeks

Course		Course Title	Tota Hou
CHEM	208	Chemistry of Dental Materials	34
ENG	206	Language & Communications	34
ENG	200	Language and Communications	34
PSY	200	Social Psychology	34
HR	200	Personnel Management	17
MET	200	Metallurgy	34
LAB	200	Dental Laboratory and Lecture	340
			527

Semester 5 — 15 weeks

Course		Course Title	Tota Hou
NUT	300	Nutrition and Diet	15
DENT	316	Community Dentistry, Ethics & Jurisprudence	15
BESC	100	Behavioural Science	30
LAB	300	Dental Laboratory and Lecture	300.0
SBM	200	Small Business Management	30.0
			390.0

Semester 6 — 17 weeks

Course		Course Title	Total Hours
LAB	300	Dental Laboratory and Lecture	340.0
SMB	200	Small Business Management	34.0
LAB	301	Field Work	102.0
			476.0

Denture Therapy GBC code: DE106

Location: Casa Loma
Length: 5 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in physics, chemistry and biology in years 3 and 4 at, or above, the general level, or equivalent. Applicants must attend a selection interview, take a manual dexterity test, and undertake an aptitude test.

Background: Credits in the sciences beyond the grade 12 level are recommended.

In 1974 the Ontario Government passed legislation to establish a new type of dental health worker — the denture therapist. This auxiliary may deal directly with the public in carrying out certain functions which were previously the sole prerogative of the dentist.

Students are trained in the technical areas required to fabricate and insert dentures, instruction also involves an understanding of the patient and includes such subjects as anatomy, physiology, microbiology, bacteriology and nutrition.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
BIO	102	Human Biology	30.0
ENG	110	Language & Communications	30.0
EC	101	Economics	30.0
MATH	107	Mathematics	30.0
LAB	101	Dental Laboratory & Lecture	300.0
CHEM	107	Chemistry and Science of Dental Material	30.0
ANAT	102	Dental Anatomy	30.0
PHAR	102	Pharmacology & Emergency Care	30.0
			510.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
BIO	102	Human Biology	34.0
ENG	110	Language & Communications	34.0
EC	101	Economics	34.0
MATH	107	Mathematics	34.0
LAB	101	Dental Laboratory & Lecture	340.0
CHEM	107	Chemistry and Science of Dental Material	34.0
DENT	101	Dental (Manipulation) Technology	34.0
BIO	104	Microbiology	17.0
PATH	100	Oral Pathology "A"	17.0
			578.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ANAT	204	Anatomy — Head & Neck	30.0
ANAT	205	Advanced Dental Anatomy	15.0
PATH	200	Oral Pathology B	15.0
SBM	200	Small Business Management	30.0
PSY	200	Social Psychology	30.0
LAB	201	Dental Laboratory & Lecture	45.0
DTC	200	Denture Therapy — Clinical	180.0
CHEM	207	Chemistry & Science of Dental Materials	30.0
PROS	204	Prosthodontics	60.0
			435.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
HIST	100	Dental Histology & Embryology "A"	34.0
PROS	204	Prosthodontics	102.0
SBM	200	Small Business Management	34.0
PSY	200	Social Psychology	34.0
BESC	101	Behavioural Science	51.0
CHEM	207	Chemistry & Science of Dental Materials	34.0
DTC	200	Denture Therapy — Clinical	204.0
			493.0

Semester 5 — 20 weeks

Course		Course Title	Total Hours
NUT	301	Nutrition & Diet	30.0
DENT	316	Community Dentistry, Ethics & Jurisprudence	15.0

DTC	300	Denture Therapy — Clinical	240.0
DTFW	300	Denture Therapy — Field Work	60.0
MED	100	Oral Medicine	40.0
			385.0

Orthotic-Prosthetic Techniques GBC code: DE110

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in biology and physics at, or above, the general level, or equivalent. Candidates must undertake an aptitude test.

Background: Machine shop, drafting, and the ability to use hand tools are assets.

The orthotic prosthetic technician is employed in hospitals, rehabilitation centres and private clinics. He or she, in association with the orthotist prosthetist, makes braces and artificial limbs which are fitted to help rehabilitate disabled patients. Appliances are made of plastics, metal, and leather from plaster casts and drawings.

The student can train for this challenging profession in the two-year technician program. The third year which is optional, combined with two years internship in a certified facility, enables the student to sit for certification by the Canadian Board for Certification of Prosthetists and Orthotists.

This program will appeal to people who are interested in working with people and helping patients in their attempts to overcome their disabilities.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
ANAT	104	Gross Anatomy	32.0
PROS	101	Materials and Laboratory Techniques	224.0
ENDR	113	Technical Drawing	48.0
MET	100	Metallurgy	32.0
MATH	104	Mathematics	32.0
WELD	147	Welding Techniques	48.0
PROS	100	Orthotics-Prosthetics Theory	32.0
MECH	104	Mechanics	32.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ANAT	104	Gross Anatomy	32
PROS	101	Materials and Laboratory Techniques	224
MACH	126	Machine Shop	48
ENDR	113	Technical Drawing	48
MET	100	Metallurgy	32
MATH	104	Mathematics	32
PROS	100	Orthotics-Prosthetics Theory	32
MECH	104	Mechanics	32
			480

Semester 3 — 16 weeks

Course		Course Title	Total Hours
ENG	103	Language & Communications	32
PL	125	Plastics	32
ELTC	130	Electronics	48
PROS	200	Orthotic and Prosthetic Theory	32
PROS	203	Field Training	96
PROS	201	Materials and Lab Techniques	208
MECH	114	Strength of Materials	32
			480

Semester 4 — 16 weeks

Course		Course Title	Total Hours
ENG	103	Language & Communications	32
PL	125	Plastics	32
ELTC	130	Electronics	48
PROS	200	Orthotic and Prosthetic Theory	32
PROS	203	Field Training	96
PROS	201	Materials and Lab Techniques	208
MECH	114	Strength of Materials	32
			480

Semester 5 — 16 weeks

Course		Course Title	Total Hours
PROS	300	Orthotic-Prosthetic Theory	32
PROS	301	Advanced Lab Techniques	64

BIO	302	Biomechanics & Kinesiology	32.0
PROS	303	Field Training	144.0
PROS	304	Rehabilitation Medicine	48.0
PROS	305	Research Project	32.0
PSY	303	Social and Vocational Rehab	16.0
ANAT	300	Anatomy& Physiology	48.0
PATH	305	Pathophysiology	32.0
PSY	202	Psychology	32.0
SURG	300	Orthopedic Surgery — Lecture	16.0
			480.0

Semester 6 — 16 weeks

Course		Course Title	Total Hours
ANAT	106	Anatomy and Physiology	48.0
PROS	300	Orthotic-Prosthetic Theory	16.0
PROS	301	Advanced Lab Techniques	128.0
PATH	305	Pathophysiology	32.0
PSY	202	Psychology	32.0
PROS	305	Research Project	32.0
SURG	300	Orthopedic Surgery — Lecture	16.0
BIO	302	Biomechanics & Kinesiology	32.0
PROS	303	Field Training	144.0
			480.0

Fitness Instructor GBC code: PE140

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics, chemistry and biology in years 3 and 4 at, or above, the general level, or equivalent.

Background: Credits in chemistry and/or biology at the senior level are desirable.

Since people are becoming more aware of the importance of physical fitness, the demand for trained people to operate fitness facilities is increasing. The two-year Fitness Instructor program trains the student to operate fitness facilities offered by private and government agencies and hospitals.

This program places special emphasis on physical testing procedures and the designing of exercise programs according to the individual's requirements. Extensive laboratory work is included.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
CHEM	102	Biochemistry of Exercise	48.0
BIO	106	Biology	48.0
MATH	108	Fitness Research Analysis	48.0
ENG	100	Language and Communications	48.0
ADM	101	Administration Practice in Fitness Education	48.0
ANAT	105	Anatomy	64.0
FIT	100	Introduction to Fitness Testing	90.0
FIT	102	Applied Exercise Techniques	64.0
HEAL	101	Athletic Injuries	32.0
			490.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
NUT	103	Nutrition	48.0
FIT	100	Introduction to Fitness Testing	48.0
MATH	108	Fitness Research Analysis	48.0
ENG	100	Language and Communications	32.0
ANAT	105	Anatomy	64.0
PSY	104	Social Psychology	48.0
FIT	102	Applied Exercise Techniques	64.0
HEAL	101	Athletic Injuries	32.0
FIT	103	Exercise Psychology	48.0
ADM	101	Administration Practice in Fitness Education	48.0
			480.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
NUT	201	Nutrition Counselling	48.0
FIT	201	Physical Fitness & Movement Evaluation	48.0
ADM	200	Administration Practice in Fitness Education	90.0
HEAL	201	Guidelines for Activity — Special Cases	32.0
AQUA	100	Aquatic Skill Development	64.0
FIT	202	Guidelines to Exercise Programming	96.0
HEAL	202	Advanced Exercise Technique	48.0
HEAL	203	Business Management Skills	64.0
			490.0

Semester 4 — 8 weeks

Course		Course Title	Total Hours
NUT	201	Nutrition Counselling	24.0
AQUA	100	Aquatic Skill Development	32.0
ADM	200	Administration Practice in Fitness Education	40.0
HEAL	201	Guidelines for Activity — Special Cases	24.0
FIT	202	Guidelines to Exercise Programming	64.0
HEAL	203	Business Management Skills	32.0
HEAL	202	Advanced Exercise Technique	24.0
PROJ	205	Co-op Training in Fitness Field	160.0
			400.0

Kensington

Addiction Counsellor

GBC code: AP103

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. A good command of verbal and written English is needed. A satisfactory medical examination is compulsory.

Background: The course is primarily aimed at the older student with volunteer social service experience, post-high school work or both. The person able to communicate well and to show sympathy is preferred. Some knowledge of biology and chemistry is desirable.

This program prepares the student to be a counsellor in the mental health field with a special expertise in problems related to drug and alcohol dependencies and to serve a variety of individuals, agencies and communities.

The original concept of the program was developed by the Addiction Research Foundation of Ontario which, together with other agencies and organizations, continues to give guidance and advice. The program provides academic instruction (3 days per week during the first year and 2 days per week during the second year) in subjects related to human growth and behaviour, mental health, and the treatment of differing forms of addiction.

Part of the academic component of the program is experiential. Through group discussion and field work seminars students have an opportunity to increase self-awareness, to develop their strengths and to gain insight into their limitations.

The field practicum provides at least two opportunities (2 days per week during the first year and 3 days per week during the second year) to practise therapeutic skills in a variety of settings and under the instruction and supervision of professional practitioners. The diploma requires a total of 1000 hours of supervised field work.

To ensure that the student learns to integrate academic knowledge with practical applications, members of the program staff provide individual supervision. Progress is discussed regularly with the students. Staff members or students may initiate additional consultations.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
AD	100	Field Practice	210.0
AD	101	Human Growth and Behaviour	30.0
AD	102	Group Process	37.5
AD	103	Social Issues Problems and Services	30.0
AD	105	Basic Studies in Addiction	30.0
AD	106	Theory Methods and Practice of Therapy	45.0
ENG	110	Language & Communications	30.0
AD	112	Field Work Seminar	22.5
			435.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
AD	100	Field Practice	210.0
AD	101	Human Growth and Behaviour	30.0
AD	102	Group Process	37.5
AD	103	Social Issues Problems and Services	30.0
PHYS	104	Physiology and Pharmacology	30.0
AD	106	Theory Methods and Practice of Therapy	45.0
SOC	107	Sociology	30.0
AD	112	Field Work Seminar	22.5
			435.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
AD	200	Field Practice	300.0
AD	201	Human Growth and Behaviour	30.0
AD	202	Group Process	30.0
AD	206	Theory Methods and Practice of Therapy	30.0
SOC	207	Sociology	30.0
AD	208	Values Ethics and Professionalism	30.0
AD	209	Research and Independent Studies	30.0
AD	212	Field Work Seminar	15.0
			495.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
AD	200	Field Practice	300.0
AD	201	Human Growth and Behaviour	30.0
AD	202	Group Process	30.0
AD	206	Theory Methods and Practice of Therapy	30.0
AD	209	Research and Independent Studies	30.0
AD	212	Field Work Seminar	15.0
AD	211	Community Practice	30.0
			465.0

Child Care Worker GBC code: AP101

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent, with proficiency in English. Volunteer or work experience with older children and/or adolescents. A personal interview is required before acceptance into the program. A satisfactory medical examination is also required.

Background: The ability to cope at a post secondary level in written and verbal communications is required. Minimum age — 18 at date of registration.

The objectives of the program are to develop therapeutic skills and abilities in students, enabling them to work creatively with other professionals concerned with the treatment and rehabilitation of children and adolescents with problems. The academic subjects taken in the program are correlated closely with continuous supervised practical experience. The development of self-awareness and emotional maturity is emphasized as well as the ability to understand the degree of one's involvement with people.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
CHI	160	Field Practice	315.0
CHI	161	Human Growth and Development	22.5
CHI	162	Health First Aid	45.0
CHI	164	Caring for the Disturbed Child	22.5
CHI	165	Activities with Children	22.5
SOC	171	Introductory Sociology	30.0
CHI	174	Empathy Training	22.5
CHI	172	Group Process I	30.0
CHI	167	Student Group Seminar	17.0
			527.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
CHI	160	Field Practice	315.0
CHI	161	Human Growth and Development	22.5
CHI	165	Activities with Children	22.5
CHI	167	Student Group Seminar	15.0
CHI	172	Group Process I	30.0
PSY	169	Introductory Psychology	30.0
CHI	164	Caring for the Disturbed Child	22.5
CHI	166	Social Services	30.0
CHI	174	Empathy Training	22.5
			517.0

Semester 3 — 17 weeks

Course		Course Title	To Ho
CHI	260	Field Practice	38
PSY	261	Psychopathology of Childhood	2
CHI	262	Caring for the Disturbed Child	2
CHI	272	Working with Families	3
CHI	267	Student Group Seminar	1
CHI	268	Treatment Philosophies	2
CHI	270	Group Process II	2
CHI	275	Adolescence	2
			54

Semester 4 — 15 weeks

Course		Course Title	To Ho
CHI	260	Field Practice	36
PSY	261	Psychopathology of Childhood	2
CHI	262	Caring for the Disturbed Child	2
CHI	268	Treatment Philosophies	2
CHI	270	Group Process II	2
CHI	271	Therapeutic Programming	3
CHI	267	Student Group Seminar	1
CHI	276	Adolescent Role & Identity	3
			52

Community Worker GBC code: AP

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Certification: Diploma
Prerequisites: Ontario Secondary Sch Graduation Diploma with credits in years 3 4 at, or above, the general level, or equival Applicants are required to complete a qu tionnaire and have a personal interview satisfactory medical examination is require

Background: Extensive life experience, be in the involvement of people in decisionmak commitment to social change and previ community involvement are assets. The ab to communicate verbally and in writing is sential.

The community worker program enat people with experience in community wor other community involvement to enhance develop their knowledge and skills. It has b

developed in consultation with experienced community workers representing grass-roots community groups and public and private agencies.

The program consists of classroom instruction and field work practice. Emphasis is placed on developing greater understanding and insight based on life experience and on learning by sharing ideas and experiences. Each student is expected to be mature and self-directing and to assume the major responsibility for her or his own learning. The community worker is a generalist who works primarily in a resource capacity with groups and individuals at the grass-roots level.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
CW	100	Field Work	240.0
CW	101	Field Work Seminar	30.0
CW	102	Community Services and Resources	30.0
CW	104	Community Practices and Methods	30.0
CW	105	Group Process I	30.0
CW	207	Political Science	30.0
CW	107	Human Growth and Development	30.0
SOC	108	Comparative Sociology	30.0
			450.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
CW	100	Field Work	240.0
CW	101	Field Work Seminar	30.0
CW	102	Community Services and Resources	30.0
CW	104	Community Practices and Methods	30.0
CW	105	Group Process I	30.0
CW	207	Political Science	30.0
CW	107	Human Growth and Development	30.0
SOC	108	Comparative Sociology	30.0
			450.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
CW	200	Field Work	300.0
CW	201	Field Work Seminar	30.0
CW	203	Canadian Society and Social Change	30.0
CW	204	Communications and Understanding Media	30.0
CW	205	Group Process II	30.0
CW	106	Community Development	30.0
CW	208	Analysis of Health Services	15.0
CW	209	Basic Support & Intervention Skills	15.0
			480.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
CW	200	Field Work	300.0
CW	201	Field Work Seminar	30.0
CW	202	Business and Administration	30.0
CW	203	Canadian Society and Social change	30.0
CW	205	Group Process II	30.0
CW	106	Community Development	30.0
CW	208	Analysis of Health Services	15.0
CW	209	Basic Support & Intervention Skills	15.0
			480.0

Day Care Worker GBC code: AP105

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. Applicants are required to complete a questionnaire and have a personal interview. A satisfactory medical examination is required.

Background: Experience of working with infants and young children is desirable, although not essential.

This program parallels the early childhood education program with an added specialization in infant care and development. Students are trained to work with children aged six weeks to ten years in nursery and day care settings. Emphasis is placed on the provision of family-oriented day care services through courses dealing with human development, creative expression, programming, the family and administration.

Each semester is divided into blocks of eight weeks. One eight week block is for academic studies; the other is for field placement where students have the opportunity to practice with children of all ages in a variety of settings.

Graduates receive a day care worker diploma and are eligible, after two year's work experience, to apply for certification by the Association for Early Childhood Education of Ontario.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
DCW	100	Infant and Child Development	32.0
DCW	101	Health & Well Being	32.0
PSY	102	Introductory Psychology	16.0
DCW	103	Mental Health	16.0
DCW	104	Principles of Day Care	32.0
DCW	105	Creative Expression in Childhood	32.0
SOC	106	Introductory Sociology	16.0
DCW	107	Community Services	16.0
DCW	110	Special Studies — Communication	16.0
DCW	108	Group Process	12.0
DCW	111	Field Work Seminar	12.0
DCW	113	Field Practice	216.0
			448.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
DCW	100	Infant and Child Development	32.0
DCW	101	Health & Well Being	32.0
PSY	102	Introductory Psychology	16.0
DCW	103	Mental Health	16.0
DCW	104	Principles of Day Care	32.0
DCW	105	Creative Expression in Childhood	32.0
SOC	106	Introductory Sociology	16.0
DCW	110	Special Studies — Communication	16.0
DCW	108	Group Process	12.0
DCW	111	Field Work Seminar	12.0
DCW	114	Field Practice	216.0
DCW	107	Community Services	16.0
			448.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
DCW	200	Human Growth and Development	32.0
DCW	201	Children with Special Needs	16.0
DCW	202	Cognitive Development	32.0
DCW	204	Varieties of Day Care	16.0
DCW	203	Planning Management and Legislation	24.0
DCW	206	Family Dynamics	32.0
DCW	207	Parent Interviewing and Counselling	32.0
DCW	208	Professional Development	16.0
DCW	205	Creative Expression in Childhood	16.0
DCW	210	Field Work Seminar	12
DCW	212	Field Placement	216
			444

Semester 4 — 16 weeks

Course		Course Title	Tota Hou
DCW	200	Human Growth and Development	32
DCW	201	Children with Special Needs	16
DCW	202	Cognitive Development	32
DCW	204	Varieties of Day Care	16
DCW	203	Planning Management and Legislation	24
DCW	206	Family Dynamics	32
DCW	207	Parent Interviewing and Counselling	32
DCW	208	Professional Development	16
DCW	205	Creative Expression in Childhood	16
DCW	210	Field Work Seminar	12
DCW	213	Field Placement	216
			444

Creative Fashion Design GBC code: FT1

Location: Kensington
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Sch Graduation Diploma with credits in years 3 a 4 at, or above, the general level, or equivale plus artistic aptitude, apparel construct skills or a merchandising orientation.

Background: Credits in art, home econom mathematics and social sciences are desi ble.

The apparel industry in Canada needs t talent in management, design and fash concepts to maintain and increase its exp markets and its reputation for quality.

In the Creative Fashion Design program Apparel Management, emphasis is placed the study of three major areas: design and st pattern; industrial high speed sewing m chines, often computer-assisted; fibres fabrics. Alternating periods of in-plant co are provided.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	To Ho
AT	161	Operator Training I	6
PAT	141	Apparel Pattern Drafting I	8
FASH	100	Fashion Business Procedures	1

ENG	151	Technical Report Writing	32.0
FAB	150	Fabrics I	32.0
RSCH	300	Research & Survey — Course Projects	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			304.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
FAB	160	Fabrics II	48.0
AT	101	Work Management II	48.0
ENG	181	Technical Report Writing II	32.0
RSCH	351	Research & Survey — Course Projects	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			208.0

Option: 1 Apparel Section Supervisor

Semester 3 — 16 weeks

Course		Course Title	Total Hours
SEW	141A	Sewing Machine Operation — Flatbed, Serger	80.0
SEW	245	Sewing Machines; Methods	16.0
SEW	244	Special Machines, Cutting, etc.	80.0
SEW	241	Apparel Plant Supplies	64.0
AT	173	Personnel and Industrial Relations	48.0
AT	163	Personnel & Industrial Relations IA (Train)	48.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

OPTION: 1 Apparel Section Supervisor

Semester 4 — 16 weeks

Course		Course Title	Total Hours
SEW	143	Blind Stitch, Buttonhole and Sewing Machines	80.0
SEW	242A	Sewing Machine Attachments	16.0
AT	174	Managerial Organization	48.0
AT	175	Personnel & Industrial Relations	48.0
FAB	151	Fabrics, Threads, Supplies	32.0
AT	153	Needle Trade Technology	64.0
PAT	242	Pattern Markers, Pattern Layout	48.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 2 Couture Workroom Supervisor

Semester 3 — 16 weeks

Course		Course Title	Total Hours
DRES	241	Couture Construction	96.0
DRES	242	Fabrics III	48.0
DRES	244	Alterations, Fitting — Advanced	96.0
AT	173	Personnel and Industrial Relations	48.0
SEW	242A	Sewing Machine Attachments	16.0
PAT	241	Pattern Drafting Changes — V	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 2 Couture Workroom Supervisor

Semester 4 — 16 weeks

Course		Course Title	Total Hours
DRES	251	Couture Construction	96.0
DRES	252	Fabrics — Knits, Trims, Braids	48.0
DRES	254	Alterations, Fitting (Advanced)	96.0
AT	174	Managerial Organization	48.0
SEW	252A	Special Sewing Machines	16.0
PAT	251	Pattern Drafting VI	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 3 Fashion Apparel Design
Semester 3 — 16 weeks

Course		Course Title	Total Hours
PAT	261	Pattern Drafting	112.0
PAT	243	Fashion — Research	32.0
PAT	252	Apparel Design III — Advanced	48.0
DRES	247	Dressmaking Construction III — Advanced	48.0
DRES	246	Tailoring III — Men's	48.0
ENG	251	Technical Report Writing III	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			400.0

Option: 3 Fashion Apparel Design
Semester 4 — 16 weeks

Course		Course Title	Total Hours
PAT	271	Pattern Drafting	128.0
PAT	262	Apparel Design	32.0
DRES	221	Couture Construction	48.0
DRES	256	Tailoring IV	32.0
DRES	222	Alterations & Fitting	32.0
ENG	254	Technical Report Writing	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			384.0

Option: 4 Fashion Fur Design
Semester 3 — 16 weeks

Course		Course Title	Total Hours
PAT	231	Pattern Drafting	64.0
FUR	245	Fur & Leather Design	48.0
FUR	244	Fur Manufacturing Techniques	48.0
LTH	204	Leather Manufacturing Techniques	16.0
DRES	222	Alterations & Fitting	32.0
DRES	256	Tailoring IV	32.0
FUR	243	Fur Look-Alikes	16.0
LTH	203	Leather & Suede Types	32.0
FUR	247	Fur Buying	16.0
ENG	251A	Fashions in Literature — Business Writing	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 4 Fashion Fur Design
Semester 4 — 16 weeks

Course		Course Title	Total Hours
PAT	281	Pattern Drafting	96.0
FUR	255	Fur & Leather Design	48.0
FUR	254	Fur Manufacturing Techniques	48.0
LTH	254	Leather Manufacturing Techniques	16.0
DRES	257	Couture Construction	32.0
FUR	253	Fur Look-Alikes	16.0
LTH	253	Leather Types	16.0
FUR	257	Fur Buying	32.0
ENG	254	Technical Report Writing	48.0
AUD	351	Audit Relevant Courses — Course Projects	32.0
RSCH	351	Research & Survey — Course Projects	48.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 5 Apparel Buying Trainee
Semester 3 — 16 weeks

Course		Course Title
DRES	249	Store Workroom Problems
AT	141	Personnel & Industrial Relations
DRES	241A	Couture Construction
FAB	152	Fabric I — Characteristics
AT	211	Apparel Merchandising III
AUD	300	Audit Relevant Courses — Course Projects
RSCH	300	Research & Survey — Course Projects
ELECT	000	Elective
ELECT	000	Elective

Option: 5 Apparel Buying Trainee
Semester 4 — 16 weeks

Course		Course Title
DRES	255	Tailoring
DRES	248	Apparel Plant Supplies
AT	232	Apparel Merchandising
AT	230	Personnel & Industrial Relations
BUS	332	Managerial Accounting
AUD	351	Audit Relevant Courses — Course Projects
RSCH	351	Research & Survey — Course Projects
ELECT	000	Elective
ELECT	000	Elective

Option: 6 Sequence Only
Semester 5 — 16 weeks

Course		Course Title	Total Hours
PAT	341	Apparel Pattern Drafting VII	64.0
DES	300	Design-A-Line	336.0
RSCH	300	Research & Survey — Course Projects	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
			480.0

Option: 7 Sequence only
Semester 6 — 16 weeks

Course		Course Title	Total Hours
DES	351	Design-A-Line	400.0
RSCH	351	Research & Survey — Course Projects	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
			480.0

Apparel Management GBC code: FT103

Location: Kensington
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent, plus artistic aptitude, apparel construction skills or a merchandising orientation.

Background: Credits in art, home economics, mathematics and social sciences are desirable.

The apparel industry in Canada needs new talent in management, design and fashion concepts to maintain and increase its export markets and its reputation for quality.

In the Creative Fashion Design program and Apparel Management, emphasis is placed on the study of three major areas: design and style pattern; industrial high speed sewing machines, often computer-assisted; fibres and fabrics. Alternating periods of in-plant co-op are provided.

The post graduate semesters are designed to prepare the student to become a production manager in multi-plant companies through a theoretical and practical approach to management problems.

PROGRAM ROUTE: 1
Semester 1 — 16 weeks

Course		Course Title	Total Hours
AT	161	Operator Training I	64.0
PAT	141	Apparel Pattern Drafting I	90.0
FASH	100	Fashion Business Procedures	16.0
ENG	151	Technical Report Writing	32.0
FAB	150	Fabrics I	32.0
RSCH	300	Research & Survey — Course Projects	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			314.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
AT	222	Apparel Merchandising	48.0
FAB	160	Fabrics II	48.0
AT	101	Work Management II	48.0
ENG	181	Technical Report Writing II	32.0
RSCH	351	Research & Survey — Course Projects	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			256.0

Semester 3 — 16 weeks
Ten Week In-plant Co-op Assignments Between Semesters 3 & 4

Course		Course Title	Total Hours
AT	252	Garment Analysis III	32.0
AT	251	Marking & Cutting	48.0
AT	272	Personnel and Industrial Relations III	32.0
ACC	216	Managerial Accounting III	48.0
AT	221	Apparel Merchandising III	32.0
EDP	191	Computer as a Management Tool III	48.0
EC	241	Managerial Economics III	32.0
ENG	251A	Fashions in Literature — Business Writing	48.0
FAB	250	Fabrics III	32.0

AT	152	Needle Trade Technology II	48.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
			480.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
AT	200	Garment Analysis IV	32.0
AT	201	Needle Trade Technology VI	32.0
AT	273	Delivery Schedules	48.0
ACC	332	Managerial Accounting IV	32.0
AT	261	Apparel Merchandising IV	32.0
EDP	253	Computer as a Management Tool IV	48.0
EC	231	Managerial Economics	32.0
ENG	261	Technical Report Writing IV	48.0
FAB	261	Fabrics IV	32.0
AT	271	Managerial Organization IV	32.0
AT	262	Needle Trade Technology III	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
			480.0

Semester 5

The two year graduate may apply for entry into the junior year of the apparel degree program at the Philadelphia College of Textiles & Sciences.

Course		Course Title	Total Hours
AT	350	Automated Machinery	64.0
AT	320	Large Plant Problems	64.0
AT	370	Multi-Plant Problems	64.0
FAB	361	Fabrics Testing Lab	80.0
AT	373	Delivery Schedules	64.0
EDP	360	Advanced Computer Uses	64.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
			480.0

Semester 6 — 16 weeks

Course		Course Title	Total Hours
AT	350	Automated Machinery	64.0
AT	320	Large Plant Problems	64.0
AT	370	Multi-Plant Problems	64.0
FAB	361	Fabrics Testing Lab	80.0
AT	373	Delivery Schedules	64.0
EDP	360	Advanced Computer Uses	64.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
			480.0

Furniture Production and Design GBC code: FT10

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background Experience in drawing, woodworking, finishing or upholstery would be an asset.

The program concentrates on the three main skills in furniture manufacturing: cabinet making, finishing and upholstering. In the first year the student will study topics such as construction, design, factory organization and costing. Materials worked include metals, woods and plastics. During the summer the student will work in the industry.

Options: Woodworking
Finishing
Upholstery

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
FURN	101	Cabinet and Chairmaking I	64.0
FURN	102	Wood Machining I	48.0
FURN	103	Furniture Finishing I	48.0
FURN	104	Upholstery I	112.0
FURN	105	Materials I	48.0
FURN	106	Technical Drawing and Blueprint Reading	16.0
FURN	108	Furniture Production Management I	16.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	32.0
			464.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
FURN	151	Cabinet and Chairmaking II	64.0
FURN	162	Wood Machining II	48.0
FURN	163	Woodwork Finishing II	48.0
FURN	154	Upholstery II	112.0
FURN	155	Materials II	48.0
FURN	156	Technical Drawing II	16.0
FURN	158	Furniture Production Management II	16.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	32.0
			432.0

Option: 1 Woodworking

Semester 3 — 16 weeks

Course		Course Title	Total Hours
FURN	205	Materials III	16.0
FURN	207	Furniture Design II and Interiors	32.0
FURN	208	Furniture Production Management III	16.0
ENG	252	Furnishing Terminology III	16.0
FURN	201	Cabinet and Chairmaking III	160.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			320.0

Option: 1 Woodworking

Semester 4 — 16 weeks

Course		Course Title	Total Hours
FURN	255	Materials IV	16.0
FURN	257	Design and Interiors IV	32.0
FURN	258	Furniture Production Management IV	16.0
ENG	262	Furnishing Technical Writing IV	16.0
FURN	251	Cabinet and Chairmaking IV	160.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			320.0

Option: 2 Finishing

Semester 3 — 16 weeks

Course		Course Title	Total Hours
FURN	205	Materials III	16.0
FURN	207	Furniture Design II and Interiors	32.0
FURN	208	Furniture Production Management III	16.0
ENG	252	Furnishing Terminology III	16.0
FURN	203	Finishings III	224.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			384.0

Option: 2 Finishing

Semester 4 — 16 weeks

Course		Course Title	Total Hours
FURN	255	Materials IV	16.0
FURN	257	Design and Interiors IV	32.0
FURN	258	Furniture Production Management IV	16.0
ENG	262	Furnishing Technical Writing IV	16.0
FURN	263	Finishings IV	224.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			384.0

Option: 3 Upholstery

Semester 3 — 16 weeks

Course		Course Title	Total Hours
FURN	205	Materials III	16.0
FURN	207	Furniture Design II and Interiors	32.0
FURN	208	Furniture Production Management III	16.0
ENG	252	Furnishing Terminology III	16.0
FURN	204	Upholstery III	208.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			368.0

Option: 3 Upholstery

Semester 4 — 16 weeks

Course		Course Title	Total Hours
FURN	255	Materials IV	16.0
FURN	257	Design and Interiors IV	32.0

FURN	258	Furniture Production Management IV	16.0
ENG	262	Furnishing Technical Writing IV	16.0
FURN	254	Upholstery IV	208.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			368.0

Culinary Management GBC code: F106

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background: Credits in bookkeeping and business mathematics would be useful as background.

The Culinary Management program provides training in all aspects of food preparation, cooking and presentation to international standards and graduates are well versed in kitchen organization and management. Included in the program are two six-week periods of supervised work experience under top Toronto chefs.

After three years of work in the industry graduates will be eligible to write the Professional Certification Examination of the Escoffier Club.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
MATH	110	Business Mathematics	30.0
FP	104	Food Preparation	285.0
SAN	100	Sanitation and Hygiene	30.0
ENG	107	Business Communications	30.0
ACC	109	Accounting	45.0
HIND	100	Dimensions of the Hospitality Industry	30.0
			450.0

Semester 2 — 21 weeks

Course		Course Title	Total Hours
FP	104	Food Preparation	255.0
HIND	105	Menu Planning	45.0
ACC	110	Purchasing for Hospitality	45.0
ACC	109	Accounting	45.0
PSY	105	Psychology for Hospitality	30.0
ACC	112	Food Cost Control	30
HIND	113	Work Experience	18
			63

Semester 3 — 15 weeks

Course		Course Title	To Hou
EDP	105	Elementary Computer Concepts	30
ACC	217	Labour Cost Control	15
HIND	219	Management Techniques	30
FP	200	Food Preparation	25
ACC	208	Food Cost Control	30
HIND	204	Facilities Design & Planning	30
HIND	220	Equipment & Maintenance	30
PR	200	Public Relations	30
FDR	156	Blueprint Reading and Drafting	15
			46

Semester 4 — 21 weeks

Course		Course Title	To Hou
HIND	210	Personnel Management	45
CUL	200	Culinary Management Projects	90
HIND	225	Facilities Design & Planning	45
FP	201	Food Preparation	21
LAW	100	Law & Insurance	30
HIND	217	Management Practice	18
			60

Food and Beverage Management GBC code: F1

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Sch Graduation Diploma with credits in years 3 a 4 at, or above, the general level, or equivale

Background: Credits in bookkeeping and b ness mathematics would be useful.

The food industry is the most rapidly exp ing service sector of Canada's economy. 1980 it will offer more than 79,000 new j Fascinating opportunities exist in restaura commercial, social and industrial cate airline food service, health care facili hotels, resorts and fast food operations.

Students graduate with thorough trainin practical skills and management techniq using modern facilities which include t equipped bars and food preparation statio private, licensed dining lounge, and a fro food laboratory.

The latest innovations in food service management are learned with a computerized menu planning system as well as banquet catering, beverage control, restaurant accounting, nutrition and personnel management.

The college has co-operative training programs with many of Toronto's top restaurants and catering establishments, so second-year students can spend two months working with managers, learning every aspect of food management on the job.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
MATH	110	Business Mathematics	30.0
FP	101	Food Preparation	195.0
SAN	100	Sanitation and Hygiene	30.0
ENG	107	Business Communications	30.0
ACC	107	Fundamentals of Hospitality Accounting	30.0
HIND	100	Dimensions of the Hospitality Industry	30.0
HIND	205	Food & Beverage Service	45.0
HIND	108	Mixology	30.0
			420.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
EC	105	Economics	34.0
FP	101	Food Preparation	187.0
HIND	104	Menu Planning	34.0
ACC	108	Purchasing for Hospitality	34.0
ACC	104	Hospitality Accounting Procedures	34.0
PSY	105	Psychology for Hospitality	34.0
HIND	110	Wine Comprehension	34.0
HIND	112	Dining Room & Lounge Organization	34.0
NUT	100	Nutrition	34.0
MARK	105	Marketing I	34.0
			493.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
HIND	200	Function Organization	15.0
EDP	105	Elementary Computer Concepts	30.0
MARK	213	Marketing II	30.0
ACC	210	Food & Beverage Cost Control	60.0
ACC	217	Labour Cost Control	15.0
HIND	219	Management Techniques	30.0
HIND	220	Equipment & Maintenance	30.0
FP	204	Food Preparation II	90.0
HIND	205	Food & Beverage Service	30.0
FDR	156	Blueprint Reading and Drafting	15.0
HIND	209	Work Experience	90.0
			435.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
HIND	210	Personnel Management	54.0
MARK	214	Marketing III	36.0
HIND	223	Sundry Services	36.0
FBM	200	Food & Beverage Management Projects	48.0
HIND	203	Facilities Design & Planning	54.0
SEC	100	Security	54.0
ACC	218	Financial Management for Hospitality	54.0
LAW	100	Law & Insurance	54.0
HIND	216	Management Practice (Co-op)	192.0
			582.0

Hotel Management GBC code: F108

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background: Credits in bookkeeping and business mathematics would be useful.

Highly skilled management is vital to the efficient operation of modern hotels. The hotel industry is a round-the-clock business and it needs young men and women who are prepared to meet the challenge it offers.

The Hotel Management program gives the student the training to enter this field. Students learn practical skills in the most modern facilities available including fully-equipped bars and food preparation stations, a private licensed dining lounge and a front desk classroom with individual reception desks. Management techniques are learned with the aid of a computerized model of a hotel operation.

In the well-established co-operative training program second-year students spend two months with the department heads of world-famous Toronto hotels learning under expert supervision what the hotel industry is all about.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
MATH	110	Business Mathematics	30.0
FP	101	Food Preparation	195.0
SAN	100	Sanitation and Hygiene	30.0
ENG	107	Business Communications	30.0
ACC	107	Fundamentals of Hospitality Accounting	30.0
HIND	100	Dimensions of the Hospitality Industry	30.0
HIND	205	Food & Beverage Service	45.0
HIND	108	Mixology	30.0
			420.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
EC	105	Economics	34.0
FP	101	Food Preparation	187.0
HIND	104	Menu Planning	34.0
ACC	108	Purchasing for Hospitality	34.0
ACC	104	Hospitality Accounting Procedures	34.0
PSY	105	Psychology for Hospitality	34.0
HIND	110	Wine Comprehension	34.0
HIND	112	Dining Room & Lounge Organization	34.0
NUT	100	Nutrition	34.0
MARK	105	Marketing I	34.0
			493.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
HIND	200	Function Organization	15.0
EDP	105	Elementary Computer Concepts	30.0
MARK	213	Marketing II	30.0
ACC	210	Food & Beverage Cost Control	60.0
ACC	217	Labour Cost Control	15.0
HIND	219	Management Techniques	30.0
HIND	220	Equipment & Maintenance	30.0
HIND	221	Housekeeping	30.0
HIND	207	Front Desk Procedures	45.0
HIND	222	Front Office Operation	45.0
FDR	156	Blueprint Reading and Drafting	15.0
HIND	209	Work Experience	90.0
			435.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
HIND	210	Personnel Management	54.0
MARK	214	Marketing III	36.0
HIND	223	Sundry Services	36.0
HIND	224	Hotel Management Projects	48.0
HIND	203	Facilities Design & Planning	54.0
SEC	100	Security	18.0
ACC	218	Financial Management for Hospitality	54.0
LAW	100	Law & Insurance	36.0
HIND	216	Management Practice (Co-op)	192.0
			528.0

Theatre Arts GBC code: TH10

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. Applicants are interviewed prior to acceptance.

The two-year Theatre Arts program provides an opportunity to learn the artistry, practicalities, traditions and professionalism of performing and theatrical arts.

Graduates will have the foundation of skills, self-development, creativity, knowledge and understanding with which to start a career at beginner or novice level in the theatrical arts field.

Classes are schedules for approximately 35 hours a week, 32 weeks a year, for two semesters a year. A significant feature of this program is "internship" of students for practical experience with professional producing theatres as part of their training.

On successful completion of the program students receive a diploma of theatre arts.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
THEA	100	Acting I	113.0
THEA	102	Dance I	60.0
THEA	103	Movement & Mime	60.0
THEA	104	Voice & Speech I	45.0
THEA	105	Technical Studies I	42.0
THEA	106	Music (Vocal)	45.0
THEA	107	Play & Script Study	30.0
THEA	108	Costume	60.0
THEA	109	Make-up	15.0
			470.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
THEA	101	Acting II	135.0
THEA	110	Set Design & Construction	120.0
THEA	111	Voice & Speech II	45.0
THEA	112	Production I	64.0
THEA	113	Music II Vocal	90.0
THEA	114	Technical Studies II	38.0
THEA	115	Dance II	45.0
			537.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
THEA	200	Acting III	130.0
THEA	201	Directing	28.0
THEA	202	TV Production & Performance	60.0
THEA	203	Dance III	90.0
THEA	204	Voice & Speech III	45.0
THEA	205	Radio Technique	16.0
THEA	206	Music III Vocal	45.0
THEA	207	Professionalism I	52.0
THEA	208	Production II	32.0
			498.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
THEA	209	Professionalism II	34.0
THEA	210	Voice & Speech II	51.0
THEA	211	Music IV Vocal	34.0
THEA	212	Dance IV	51.0
THEA	213	Production III (Performance)	184.0
THEA	214	Production IV (Performance)	184.0
			538.0

Elective

Course		Course Title	Total Hours
ES	102	Instructional Techniques (Optional)	16.0
			16.0

Business

GBC code: B109

Location: St. James
Length: 5 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics and English in years 3 and 4 at, or above, the general level, or equivalent.

Business today offers a wide choice of interesting, well-paying careers.

There is a growing need for competent, skilled people in accounting, marketing, data processing, physical distribution, insurance, general business and sales positions.

George Brown's Business and Commerce division can give the highly concentrated training needed to enter the specialty area of the student's choice.

The first semester of all the two-year business programs is the same. This provides a broad introduction to business. Subjects include language and communication, business mathematics, introduction to accounting, insurance, data processing, marketing, and physical distribution.

In the second semester, students start to specialize in one of the areas listed below.

Option 1 — Accounting
Option 2 — Electronic Data Processing
Option 3 — Marketing
Option 4 — General
Option 5 — Physical Distribution
Option 6 — Insurance

Graduates of two-year programs may also qualify for a fifth semester in business administration. This program is for those students who, having completed a four semester Business program at George Brown College with a good academic record, desire to proceed into more advanced areas of study in business administration. It integrates the students' more advanced learning into a broader view of an organization as a whole. In addition, students increase their specialized knowledge through research projects in their major fields of study. Advanced decision-making, planning and central skills are developed through the use of modern learning techniques.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	101	Language and Communications	90.0
MATH	114	Business Mathematics	90.0
ACC	100	Introduction to Accounting I	90.0
EDP	100	Introduction to Data Processing	72.0
MARK	100	Introduction to Marketing	90.0
PHD	100	Introduction to Physical Distribution	72.0
INS	100	Principles & Practice of Insurance	36.0
			540.0

Option: 1 Accounting

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
ACC	101	Introduction to Accounting II	180.0
ELECT	000	Elective	90.0
			540.0

Option: 1 Accounting

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
ACC	200	Financial Accounting I	180.0
ACC	201	Management Information Systems	90.0
ACC	202	Cost Accounting I	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			630.0

Option: 1 Accounting

Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
ACC	203	Financial Accounting II	180.0
ACC	204	Cost Accounting II	90.0
ACC	205	Auditing	45.0
ACC	206	Taxation	45.0
ELECT	000	Elective	90.0
			540.0

Option: 2 Electronic Data Processing

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
EDP	101	Cobol I	90.0

EDP	104	Management Information Systems (MIS)	90.0
EDP	103	Programming I	90.0
			540.0

Option: 2 Electronic Data Processing
Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
EDP	200	Cobol II	90.0
EDP	209	Computer Hardware & Systems	90.0
EDP	210	Systems Analysis & Design	90.0
ELECT	000	Elective	90.0
			540.0

Option: 2 Electronic Data Processing
Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
EDP	204	Advanced Programming	90.0
EDP	211	Computer Software & Systems	90.0
EDP	208	Advanced E.D.P. Topics	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 3 Marketing
Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
MARK	101	The Sales Aspect of Marketing	90.0
MARK	102	Advertising and Sales Promotion	90.0
ELECT	000	Elective	90.0
			540.0

Option: 3 Marketing
Semester 3 — 18 weeks

Course		Course Title	Total Hours
Eng	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
MARK	200	Product Planning and Pricing Policies	90.0
MARK	201	Distribution Channels	90.0
MARK	202	Marketing Research and Information	90.0
ELECT	000	Elective	90.0
			540.0

Option: 3 Marketing
Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
MARK	205	Marketing Management I	90.0
MARK	206	Marketing Management II	90.0
MARK	207	Marketing Management III	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 4 General
Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 4 General
Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
PSY	161	Introductory Psychology	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 4 General
Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 5 Physical Distribution
Semester 2 — 18 weeks

Course		Course Title	Total Hours
PHD	102	Physical Distribution Analysis	90.0
PHD	103	Warehousing Management	90.0
PHD	105	Inventory Control I	90.0
BUS	101	Human Relations	90.0
ENG	102	Language & Communications	90.0
ELECT	000	Elective	90.0
			540.0

Option: 5 Physical Distribution
Semester 3 — 18 weeks

Course		Course Title	Total Hours
PHD	202	Physical Distribution Systems — Management I	90.0
PHD	204	Industrial Purchasing	90.0
PHD	203	Traffic & Transportation Management I	90.0
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
ELECT	000	Elective	90.0
			540.0

Option: 5 Physical Distribution
Semester 4 — 18 weeks

Course		Course Title	Total Hours
PHD	205	Physical Distribution Systems — Management I	90.0
PHD	206	Inventory Control II	90.0
PHD	207	Traffic and Transportation Management II	90.0
BUS	215	Media Applications	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 6 Business Insurance
Semester 2 — 18 weeks

Course		Course Title	Total Hours
INS	101	Insurance on Property I	90.0
INS	102	Automobile Insurance	90.0
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
ELECT	000	Elective	90.0
			540.0

Option: 6 Business Insurance
Semester 3 — 18 weeks

Course		Course Title	Total Hours
INS	200	Insurance on Property II	90.0
INS	201	Insurance Against Liability	90.0
INS	202	Loss Adjustments & Claims Settlements	90.0
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
ELECT	000	Elective	90.0
			540.0

Option: 6 Business Insurance
Semester 4 — 18 weeks

Course		Course Title	Total Hours
INS	205	Property Loss Adjustments	90.0
INS	206	Casualty Covers	90.0
INS	207	Burglary & Fidelity Insurance	90.0
BUS	215	Media Applications	90.0
LAW	200	Business Law I	90.0
ELECT	000	Elective	90.0
			540.0

Option: 7 Business Administration
Semester 5 — 18 weeks

Course		Course Title	Total Hours
BUS	320	Organizational Behavior	90.0
BUS	321	Financial Management	90.0
BUS	322	International Business	90.0
BUS	324	Canadian Business Policy & Strategy	90.0
BUS	325	Faculty Directed Research	90.0
			450.0

Sales GBC code: B142

Location: St. James
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics and English in years 3 and 4 at, or above, the general level, or equivalent.

Background: The ability to succeed with a minimum of supervision is essential.

The one year Sales program has been developed to assist the aspiring salesperson to develop sales skills.

The study of buying psychology and sales presentation theory followed by video sales

presentations in a business atmosphere with color T.V. playback gives the student unique experience in handling sales calls at the industrial sales level.

During the two semesters of instruction the student obtains an understanding of the sales quotation letter, business letter writing, business mathematics, basic marketing, accounting, human relations and other business functions.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	101	Language and Communications	90.0
MATH	114	Business Mathematics	90.0
BUS	101	Human Relations	90.0
MARK	100	Introduction to Marketing	90.0
ACC	100	Introduction to Accounting I	90.0
PHD	100	Introduction to Physical Distribution	90.0
			540.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
LAW	200	Business Law I	90.0
MARK	101	The Sales Aspect of Marketing	90.0
MARK	201	Distribution Channels	90.0
ELECT	000	Elective	90.0
			540.0

Secretarial Arts GBC code: B105

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. A written English test is administered to applicants and a passing grade of 65% is required.

All students who wish to pursue programs in general-executive, legal or medical secretarial arts take a common first year of introductory and general background courses. The main purpose is to provide the student with a solid foundation in secretarial skills.

Toward the end of first year, the student decides which course of study to pursue. These are described on the following pages as:

Option 1 — General Executive
Option 2 — Legal
Option 3 — Medical

Each of these programs provides intensive study in the major subject area for an additional two semesters and provides a 2-year secretarial diploma.

Program Route: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	101	Language and Communications	90.0
MATH	113	Business Mathematics	90.0
OP	100	Typewriting & Office Practice	126.0
SH	100	Shorthand Pitman or Machine	180.0
ELECT	000	Elective	54.0
			540.0

Semester 2 — 18 weeks

Toward the end of the first year the student decides which course of study to pursue.

Course		Course Title	Total Hours
ENG	104	Business Communication	90.0
OP	101	Typewriting & Office Practice	180.0
SH	101	Shorthand Pitman or Machine	180.0
ELECT	000	Elective	90.0
			540.0

Option: 1 General Executive

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
ACC	212	Secretarial Accounting (Introductory)	54.0
SH	200	Shorthand	180.0
OP	200	Secretarial Procedures	180.0
BUS	100	Business Organization	54.0
			540.0

Option: 1 General Executive

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
LAW	205	Business Law	54.0
SH	201	Applied Stenography	180.0
OP	201	Secretarial Practice & Word Processing	180.0
DIC	205	Dictaphone	36.0
			540.0

Option: 2 Legal

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
LAW	202	Business Law	90.0
OP	202	Legal Office Practice	90.0
SH	202	Legal Shorthand	180.0
BUS	233	Word Processing and Dicta	90.0
			540.0

Option: 2 Legal

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
LAW	203	Business Law	90.0
OP	203	Legal Office Practice	90.0
SH	203	Legal Shorthand	126.0
ACC	215	Legal Accounting (Introductory)	54.0
BUS	234	Word Processing and Dicta	90.0
			540.0

Option: 3 Medical

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
OP	204	Medical Office Practice	90.0
SH	204	Medical Shorthand	180.0
ANAT	201	Anatomy & Physiology (Medical Terminology-I)	90.0
DIC	201	Medical Typing and Dicta	90.0
			540.0

Option: 3 Medical

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
OP	205	Medical Office Practice	90.0
SH	205	Medical Shorthand	126.0
ANAT	203	Anatomy & Physiology (Medical Terminology-II)	90.0
ACC	214	Medical Accounting (Introductory)	54.0
DIC	202	Medical Typing Dicta and Word Processing	90.0
			540.0

Medical Dicta-Typing GBC code: B143

Location: St. James
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. A written English test is administered to applicants and a passing grade of 65% is required.

Background: Applicants must have a minimum typing speed of 45 W.P.M.

A one-year Medical Dicta - Typing program is offered to those who already have a minimum typing speed of 45 W.P.M. and who do not want shorthand in their program. It is a certificate course as opposed to the two-year diploma program which has shorthand.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
OP	204	Medical Office Practice	90.0
DIC	200	Medical Dictaphone	180.0
ANAT	201	Anatomy & Physiology (Medical Terminology-I)	90.0
DIC	202	Medical Typing Dicta and Word Processing	90.0
			540.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
OP	205	Medical Office Practice	90.0
DIC	201	Medical Typing and Dicta	126.0
ANAT	203	Anatomy & Physiology (Medical Terminology-II)	90.0
ACC	214	Medical Accounting (Introductory)	54.0
DIC	203	Medical Dictaphone & Word Processing	90.0
			540.0

Court Reporting GBC code: B441

Location: St. James
Length: 2 Semesters
Certification: Certificate
Prerequisites: Successful completion of a recognized Legal Secretarial Arts program or related business experience with a shorthand speed (Pitman or machine) of 130 w.p.m. on straight matter for five minutes and 60 w.p.m. in typewriting. Applicants meeting the shorthand

requirement will have to continue their reporting studies in the shorthand system on which they were tested.

Background: English and communication skills and a high degree of manual dexterity are strongly recommended.

This is an intensive course in reporting skills which will prepare the student for employment in the court reporting field. The course of study, as well as covering many other areas, includes actual experience in the courts working with an experienced court reporter. The Chartered Shorthand Reporters' Association examination can be written on completion of the course.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	401	English and the Legal World	54.0
BUS	407	Legal Medical and General Terminology	90.0
BUS	408	Court Procedures	90.0
BUS	409	Current Events	36.0
SH	402	Shorthand & Transcription Pitman or Machine	270.0
			540.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	404	English and the Legal World	54.0
BUS	412	Legal Medical and General Terminology	90.0
BUS	411	Field Work in the Courts	90.0
BUS	410	Current Events	36.0
SH	403	Shorthand & Transcription Pitman or Machine	270.0
			540.0

Stenomask GBC code: B144

Location: St. James
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. An interview is required.

Background: Prior knowledge of typewriting is useful but not essential.

Stenomask reporting is an alternative to shorthand for recording court proceedings which are later transcribed into typewritten form. Using stenomask equipment, the court reporter repeats what is being said into a "Mask" which is attached into a recording device. A speed of up to 250 words per min is required.

Students will follow the same program study as in the regular Court Reporting p gram, except that they will develop their cording skills on the stenomask rather tha shorthand.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	To Ho
ENG	105	English & the Legal World	5
BUS	110	Legal, Medical & General Terminology	
BUS	111	Court Procedures	
BUS	112	Current Events	
SH	102	Stenomask & Transcription	27
			54

Semester 2 — 18 weeks

Course		Course Title	To Ho
ENG	106	English & the Legal World	5
BUS	113	Legal, Medical & General Terminology	
BUS	114	Fieldwork in the Courts	
BUS	115	Current Events	
SH	103	Stenomask & Transcription	27
			54

Construction Management GBC code: B1 **— Residential**

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Sch Graduation Diploma with credits in mat matics and English in years 3 and 4 at above, the general level, or equivalent.

This program is designed to provide gra ates who can qualify for management supervisory positions in the residential c struction industry. This is a specialized fi that differs significantly from general constr tion. Will include construction techniqu business management, finance, law, hum resources management, business communi tion and government relations.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ARDR	100	BPR & Elementary Drafting	54.0
CO	110	Building Construction	54.0
CO	111	Materials of Construction	54.0
CO	112	Contracts, Specifications & Codes	54.0
SURV	103	Quantity Surveying & Estimating	54.0
BUS	107	Small Business Management	90.0
ENG MARK	112 103	Business Communication Introduction to Marketing Management	45.0
			450.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ARDR	101	Architectural Drafting	54.0
CO	110	Building Construction	54.0
CO	111	Materials of Construction	54.0
CO	112	Contracts, Specifications & Codes	54.0
SURV	103	Quantity Surveying & Estimating	54.0
BUS	109	Job Site Management I	90.0
BUS	212	Human Resources Management	90.0
MARK	104	Salesmanship	45.0
			495.0

Semester 3 — 18 weeks

Course		Course Title	Total Hours
CO	211	Construction Project Scheduling	45.0
CO	212	Building Construction	45.0
SURV	205	Quantity Surveying & Estimating	45.0
SURV	206	Elementary Surveying — Theory	45.0
ARDR	200	Design & Planning	45.0
BUS	200	Job Site Management II	45.0
LAW	208	Law I Canadian Business Law	45.0
LAW	209	Law II Law of Real Estate	45.0
BUS	216	Business — Government Relations	45.0
BUS	217	Purchasing & Inventory Control	45.0
			450.0

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ARDR	201	Final Design Project	36.0
SURV	207	Elementary Surveying — Legal	36.0
CO	213	Mechanical-Electrical Services-Electrical	36.0
CO	214	Mechanical-Electrical Services-Plumbing	36.0
CO	215	Mechanical-Electrical Services-Heating	36.0
BUS	219	Law III Real Estate & Development	45.0
BUS	202	Promotional Management I	45.0
BUS	203	Promotional Management II	45.0
BUS	204	Urban Development Policy Strategy	45.0
BUS	221	Financial Management	45.0
			405.0

Property Management GBC code: B114 **— Residential**

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. All applicants are interviewed by a professional property manager.

Background: Credits in bookkeeping and business mathematics would be useful as background.

The curriculum of this program was developed by leaders of the property management industry and is intended to prepare candidates for certification in the public and private sectors. Emphasis will be placed on sound business administration, marketing, accounting, law, personnel management and insurance, purchasing and inventory control, security and safety, resident relations, maintenance and housekeeping.

Lectures, case studies and practical on-site assignments will be provided to enable the student to deal effectively with day to day property management problems. This full-time program includes college-supervised work experience under qualified managers.

Graduates are eligible for professional certification by the Housing and Urban Development Association of Canada and the Social Housing Institute.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
HOUS	111	Housekeeping	60.0
ACC	111	Accounting	45.0
SEC	111	Security and Safety	30.0
MAIN	111	Maintenance	105.0
LAW	111	Law	30.0
ENG	110	Language & Communications	45.0
MATH	101	Mathematics	30.0
URB	100	Urban Studies	30.0
PROP	100	Introduction to Property Management	30.0
			405.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
HOUSE	111	Housekeeping	68.0
INV	111	Purchasing and Inventory Control	34.0
ACC	111	Accounting	34.0
SEC	111	Security and Safety	34.0
REL	111	Resident Relations	34.0
MAIN	111	Maintenance	68.0
LAW	111	Law	34.0
ENG	111	Language & Communications	51.0
MATH	101	Mathematics	34.0
URB	100	Urban Studies	34.0
PSY	102	Introductory Psychology	34.0
			459.0

Semester 3 — 15 weeks

Third semester includes one week work experience in industry.

Course		Course Title	Total Hours
MARK	211	Advertising & Sales Promotion	45.0
ACC	213	Accounting	30.0
INS	211	Insurance	45.0
REL	211	Resident Relations	30.0
PERS	211	Personnel Management	30.0
PROP	211	Amenity & Common Area Management	30.0
LAW	211	Law	30.0
PRAC	111	Management Practice	75.0
PROP	200	Condominium Management	30.0
PSY	103	Business Psychology	30.0
			375.0

Semester 4 — 17 weeks

Fourth semester includes two weeks work experience in industry.

Course		Course Title	Total Hours
MARK	211	Advertising & Sales Promotion	51.0
ACC	213	Accounting	34.0
INS	211	Insurance	34.0
PERS	211	Personnel Management	34.0
PROP	211	Amenity & Common Area Management	34.0
LAW	211	Law	34.0
PRAC	211	Management Practice	85.0
PROP	200	Condominium Management	34.0
PROJ	200	Research Project	75.0
			415.0

Acoustics Technician GBC code: EL10

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year mathematics and English and year 3 physics or equivalent.

Background: Credits in physics, drafting and electricity/electronics are desirable.

The acoustics technician program provides thorough grounding in principles of acoustic design, sound analysis and modern practices of noise control and hearing conservation. Students are trained in well-equipped laboratories in the operation of professional and industrial instruments used for sound and vibration measurement and analysis for audio-metric screening and audio reproduction.

Application has been made for certification of graduates by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	108	AM/FM Receivers	27.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			435.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	103	Amplifiers and Devices	50.0
ELTC	111B	Applied Circuit Analysis II	28.0
ELTC	203	Computer Aided Design	28.0
ENG	100	Language and Communications	28.0
BUS	101	Human Relations	42.0
ELTC	112B	Laboratory	112.0
ELDR	121	Drafting Fundamentals	28.0
ELTC	210	Digital Principles	70.0
INST	108	Instrumentation Fundamentals	42.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
			462.0

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ELTC	108	AM/FM Receivers	36.0
ACOU	200	Environmental Acoustics	52.0
ACOU	201A	Sound and Vibration Analysis	45.0
ACOU	211A	Noise Control I	45.0
ACOU	213A	Acoustics Laboratory	88.0
ACOU	214A	Acoustic Systems Design	90.0
ELTC	211	Audio Principles	54.0
ELTC	218	Electronic Systems and Measurements	52.0
MATH	201	Mathematics	54.0
ENG	200	Language and Communications	36.0
ELTC	217	Electronic Laboratory	56.0
			608.0

Semester 4 — 20 weeks

Course		Course Title	Total Hours
ACOU	201B	Sound and Vibration Analysis	100.0
ACOU	211B	Noise Control II	100.0
ACOU	213B	Acoustics Laboratory	180.0
ACOU	214B	Acoustic Systems Design	100.0
MATH	202	Mathematics	80.0
ENG	200	Language and Communications	40.0
BUS	100	Business Organization	60.0
ELTC	299	Technical Report	
			660.0

Electronics Technician GBC code: EL103

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in year 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent

Background: Credits in physics, drafting, electricity/electronics, mechanics, chemistry and computer programming would be a useful background. The technician is usually working with the customer; therefore, an ability to work with and to communicate effectively with others is most essential.

The Electronics Technician program provides both men and women with the opportunity to work in the maintenance, installation, production, design or research phases of the electronics industry. In order to better qualify the graduate for immediate productive work in industry, the program has been designed so that in the second year the student specializes in one of the following areas: communications, computers, ETV/TV broadcast. Graduates of this program are now employed in research and engineering departments of government and industry, in utility companies, in radio and television broadcasting, in closed circuit television studios, in the oil industry, and in the installation of computer and communications systems. Graduates have the academic qualifications acceptable to the Ontario Association of Certified Engineering Technicians and Technologists for certification as a Senior Engineering Technician.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	108	AM/FM Receivers	27.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0

ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			435.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	103	Amplifiers and Devices	50.0
ELTC	111B	Applied Circuit Analysis II	28.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	203	Computer Aided Design	28.0
ENG	100	Language and Communications	28.0
BUS	101	Human Relations	42.0
ELTC	112B	Laboratory II	112.0
ELDR	121	Drafting Fundamentals	28.0
ELTC	210	Digital Principles	70.0
INST	108	Instrumentation Fundamentals	42.0
			462.0

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ELTC	108B	AM/FM Receivers Part II	36.0
ELTC	207	Advanced Semi-Conductors Devices	66.0
ELTC	208	Pulse Circuits	66.0
ELTC	209	Laboratory	162.0
ELTC	211	Audio Principles	54.0
ELTC	212	Video Principles	54.0
MATH	201	Mathematics	54.0
ENG	200	Language and Communications	36.0
ELTC	105	TV Principles	48.0
			576.0

Semester 4 — 20 weeks

Course		Course Title	Total Hours
ELTC	210	Digital Principles	72.0
ELTC	209B	Laboratory	160.0
MATH	202	Mathematics	80.0
MECH	202	Mechanisms	60.0
ELTC	299	Technical Report	
ENG	200	Language and Communications	40.0
BUS	100	Business Organization	60.0
ELTC	213	Communication Principles	72.0
ELECT	000	Elective	96.0
			640.0

Choose 1 of the following 3

Course		Course Title	Tot Hou
ELTC	215	Communications Systems	96
ELTC	216	Computer Systems	96
ELTC	219	ETV/TV Broadcast Maintenance Systems	96

Electronics Technologist GBC code; EL1(

Location: St. James
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Sch Graduation Diploma with credits in years 3 a 4 at or above the general level including yea mathematics and English and year 3 physi or equivalent.

Background: Credits in physics, chemist drafting, electricity/electronics, mechanics a computer programming at level 4 a mathematics at level 5 would be useful bac ground.

This coeducational program was develop to meet the needs of industry for engineeri technologists with a practical and theoretic knowledge who will be able to work effective in the many areas of electronics. Technologi usually work on their own initiative, but unc the general supervision of an engineer, scientist or senior technologist. This progra provides the student with a knowledge advanced electronics based on quantitati analysis of electronic circuits and systen Graduates may be employed in many field design and construction of equipment/ maint nance, repair, and installation of systems (co puters, communication); quality control ma agement; marketing and research. Because the depth of knowledge required by the tec nologist, the College will review the student progress at the end of the first semester determine suitability for further technolog training. Those not qualifying, may be transf red to the Electronics Technician progra Graduates of the technology program ha academic qualifications acceptable to the Ont tario Association of Certified Engineerin Technicians and Technologists for certificati as an Engineering Technologist.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Tot Hou
ELTC	109	Introduction to Motors & Generators	27
INST	108	Instrumentation Fundamentals	45

ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102C	Electronic Fundamentals — Advanced	52.0
ELTC	103T	Amplifiers & Devices	91.0
ELTC	104A	Advanced Transistors	39.0
ELTC	111T	Laboratory	14.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	112T	Laboratory	98.0
ENG	100	Language and Communications	28.0
MATH	102T	Mathematics	42.0
BUS	101	Human Relations	42.0
ELDR	121	Drafting Fundamentals	28.0
			448.0

Semester 3 — 14 weeks

Course		Course Title	Total Hours
ELTC	104B	Advanced Transistors	28.0
ELTC	200	AM/FM Receiver Technology	70.0
ELTC	201	Wave Shaping and Control Devices	70.0
ELTC	202A	Logic Systems Part I	28.0
ELTC	221A	Laboratory	84.0
MATH	210T	Mathematics	70.0
PHY	201T	Modern Physics	42.0
ENG	200	Language and Communications	28.0
			420.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
ELTC	202B	Logic Systems Part II	36.0
ELTC	203T	Computer Aided Design	48.0
ELTC	302	Computer Technology	78.0
ELTC	205	Communications Technology I	78.0
ELTC	304	System Design Principle (Tutorial)	16.0
ELTC	221B	Laboratory	112.0
MATH	202	Mathematics	80.0
PHY	202T	Modern Physics	48.0
ENG	200	Language and Communications	32.0
			528.0

Semester 5 — 17 weeks

Course		Course Title	Total Hours
ELTC	204	Solid State Operational Amplifier Design	80.0
ELTC	300	Pulse Technology	64.0
ELTC	309A	Laboratory	119.0
ENG	300	Report Writing	34.0
MATH	301	Mathematics	68.0
ELTC	310	Advanced Circuit Analysis	32.0
ELTC	304B	Systems Design Principles Part II	64.0
ELTC	305	Electronic Mechanical Design Principles	32.0
			493.0

Semester 6 — 14 weeks

Course		Course Title	Total Hours
ELTC	301	Communications Technology II	70.0
ELTC	303	Automatic Controls Systems	84.0
ELTC	309B	Laboratory	98.0
BUS	300	Business Organization	42.0
MECH	302T	Mechanic and Mechanisms	56.0
ELTC	399	Technology Report	
ELTC	306	Component Technology	42.0
			392.0

Industrial Instrumentation GBC code: EN101
Technician

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: Credits in physics, drafting, electricity/electronics, mechanics, chemistry and computer programming would be a useful background. The technician is usually working with the customer; therefore, an ability to communicate effectively with others is most essential.

The instrumentation technician works in all phases of industry using automatic controls. Job opportunities range from positions in research and development to sales and service for instrument manufacturers.

Each instruction period is followed by one or more laboratory periods to reinforce theory. The student is given a sound grounding in pneumatic instrumentation, electronic instrumentation, computers and related academic subjects.

Graduates have technical and academic qualifications acceptable to the Ontario Association of Certified Engineering Technicians and Technologists for certification.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	108	AM/FM Receivers	27.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			435.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	103	Amplifiers and Devices	50.0
ELTC	111B	Applied Circuit Analysis II	28.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	203	Computer Aided Design	28.0
ENG	100	Language and Communications	28.0
BUS	101	Human Relations	42.0
ELTC	112B	Laboratory	112.0
ELDR	121	Drafting Fundamentals	28.0
ELTC	210	Digital Principles	70.0
INST	108	Instrumentation Fundamentals	42.0
			462.0

Semester 3 — 18 weeks

Course		Course Title	To Ho
ELTC	108B	AM/FM Receivers Part II	36
ELTC	207	Advanced Semi-Conductors Devices	84
INST	101	Electronic Instrumentation	63
INST	100	Measuring Principles	42
INST	102	Piping & Construction Techniques	36
INST	209A	Laboratory	63
MATH	200	Mathematics	54
ENG	200	Language and Communications	36
CHEM	100	Applied Chemistry	45
ELTC	209A	Laboratory	63
			551

Semester 4 — 20 weeks

Course		Course Title	To Ho
INST	200	Automatic Control Principles I	72
INST	202	Analytical & Environmental Instrumentation	60
BUS	100	Business Organization	60
MATH	200	Mathematics	80
ELTC	210	Digital Principles	72
ENG	200	Language and Communications	40
INST	201	Final Control Elements	36
INST	209B	Laboratory	126
ELTC	209B	Laboratory	60
CHEM	200	Industrial Chemistry & Equipment	34
INST	299	Technical Report	
			634

Industrial Instrumentation GBC code: EN
Technologist

Location: St. James
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Sch Graduation Diploma with credits in years 3 a 4 at or above the general level including yea mathematics and English and year 3 physi or equivalent.

Background: Credits in physics, draftin electricity/electronics, mechanics and co puter programming at level 4 and mathemati level 5 would be useful. Year 4 chemistry highly recommended.

The instrumentation technologist wo mainly in design and systems modification. J opportunities range from challenging positio

in research and development to sales and service for instrument manufacturers.

The Industrial Instrumentation Technology program gives a six semester program in two years.

Each instruction period is followed by one or more laboratory periods to reinforce theory. The student is given a firm grounding in electronic instrumentation, pneumatic instrumentation, computer technology and related academic subjects.

Graduates have technical and academic qualifications acceptable to the Ontario Association of Certified Engineering Technicians and Technologists for certification.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102C	Electronic Fundamentals — Advanced	52.0
ELTC	103T	Amplifiers & Devices	91.0
ELTC	104A	Advanced Transistors	39.0
ELTC	111T	Laboratory	14.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	112T	Laboratory	98.0
ENG	100	Language and Communications	28.0
MATH	102T	Mathematics	42.0
BUS	101	Human Relations	42.0
ELDR	121	Drafting Fundamentals	28.0
			448.0

Semester 3 — 14 weeks

Course		Course Title	Total Hours
ELTC	104B	Advanced Transistors	28.0
ELTC	200	AM/FM Receiver Technology	70.0
ELTC	201	Wave Shaping and Control Devices	70.0
ELTC	202A	Logic Systems Part I	28.0
ELTC	221A	Laboratory	84.0
MATH	201T	Mathematics	70.0
PHY	201T	Modern Physics	42.0
ENG	200	Language and Communications	28.0
			420.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
ELTC	202B	Logic Systems Part II	36.0
INST	101T	Electronic Instrumentation	36.0
INST	221B	Laboratory	112.0
MATH	202	Mathematics	80.0
PHY	202T	Modern Physics	48.0
CHEM	100	Applied Chemistry	48.0
ENG	200	Language and Communications	32.0
ELTC	203T	Computer Aided Design	48.0
ELTC	302	Computer Technology	78.0
INST	100T	Measuring Principles	42.0
			560.0

Semester 5 — 17 weeks

Course		Course Title	Total Hours
INST	202T	Analytical & Environmental Instrumentation	60.0
INST	200T	Automatic Control Principles	56.0
INST	201T	Final Control Elements	48.0
INST	309A	Laboratory	84.0
MATH	301	Mathematics	68.0
ELTC	204	Solid State Operational Amplifier Design	80.0
ELTC	310	Advanced Circuit Analysis	32.0
CHEM	200	Industrial Chemistry & Equipment	34.0
ENG	300	Report Writing	34.0
			496.0

Semester 6 — 14 weeks

Course		Course Title	Total Hours
INST	302	Systems Design and Construction	84.0
INST	304	Telemetering	28.0
INST	309B	Laboratory	56.0
ELTC	309B	Laboratory	42.0

ELTC	303	Automatic Controls Systems	84.0
BUS	300	Business Organization	42.0
MECH	302	Mechanics & Mechanisms	56.0
INST	399	Technical Report	
			392.0

Graphics Arts GBC code: G101
Printing Technician

Location: St. James
Length: 3 Years
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 or equivalent.

Background: Drafting skills, mechanical aptitude, typing skills, artistic interests are all useful in various parts of the trade.

The printing industry is one of the largest employers in the Toronto area, which in turn is known as a centre of superior quality printing companies. Several years ago, a survey of the industry indicated a real need for highly trained technicians to permit the industry to expand.

The Printing Technology department has the most modern presses, photocomposition equipment, process cameras, electronic colour scanners, stripping, platemaking and bindery equipment.

Technicians in the 3-year program take "hands-on" technical training in eight major areas for each of the first two years and then select one area, such as presswork, photocomposition, camera and stripping or bindery in which to specialize in the third year.

Graphic Arts Printing Technician technical courses are presented in a block system. Each technical course requires one block during the academic year. A block is 20 actual successive days totalling 80 technical hours. Academic courses are presented simultaneously totalling 9 hours per week.

Options: Typographic Composition
Camera & Stripping
Machine Printing
Bindery

Program Route: 1

Year 1 — 38 weeks

Note: Students must either type or be prepared to take a 20 hour lumisonic typing course in the first year.

Course		Course Title	Total Hours
GR	100	Layout Design Typography	80.0
GR	101	Hot Metal Composition	80.0
GR	105	Photomechanical Reproduction	80.0
GR	110	Film Imposition & Printing Preparation	80.0
GR	114	Machine Printing (Letterpress)	80.0
GR	115	Machine Printing (Basic Offset)	80.0
GR	116	Machine Printing (Offset)	80.0
GR	125	Bindery	80.0
PHY	105	Physics	60.0
MATH	105	Mathematics	120.0
ENG	100	Language and Communications	80.0
CHEM	105	Chemistry	60.0
			960.0

Year 2 — 38 weeks

Course		Course Title	Total Hours
GR	202	Photocomposition Keyboard Tape Film	80.0
GR	205	Photomechanical Reproduction	80.0
GR	210	Film Imposition Printing Surface Preparation	80.0
GR	214	Machine Printing (Flexo)	80.0
GR	215	Machine Printing (Rotogravure)	80.0
GR	216	Machine Printing (Offset)	80.0
GR	217	Machine Printing (2 Color Offset)	80.0
GR	225	Bindery	80.0
GR	220	Quality Control	80.0
GR	250	Electronics	80.0
MATH	205	Mathematics	80.0
ENG	200	Language and Communications	80.0
			960.0

In year 3 students will select the area in which they wish to specialize by choosing one of the following four options — typographic composition, camera & stripping, machine printing or bindery. Students in any option will take all the courses listed for that option together with four electives. Of the four electives two will be courses from other option areas and two will be courses from the list of business & commerce courses which is shown at the end of the program profile.

Option: 1 Typographic Composition

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	300	Typographic Design and Layout	80.0
GR	301	Computer Peripherals and Typesetting	80.0
GR	302	Paste-up and Film Assembly	80.0
GR	303	Photocomposition Tape Input	80.0
GR	304	Advance Keyboard Techniques	80.0
GR	322	Cold Type Mark-up	80.0
ELECT	000	Elective	80.0
ELECT	000	Elective	80.0
ELECT	000	Elective	
ELECT	000	Elective	
			640.0

Option: 2 Camera & Stripping

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	305	Photomechanical Reproduction	80.0
GR	306	Photomechanical Reproduction	80.0
GR	307	Photomechanical Reproduction — Gravure	40.0
GR	308	Photomechanical Reproduction — Scanner	40.0
GR	310	Film Imposition and Printing Preparation	80.0
GR	311	Film Imposition and Printing Preparation	80.0
GR	312	Film Imposition and Printing Preparation	80.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			480.0

Option: 3 Machine Printing

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	314	Die Cutting & Embossing	80.0
GR	316	Machine Printing Two-colour Offset Press Adv	80.0
GR	317	Machine Printing Rotogravure Adv	80.0
GR	318	Machine Printing Flexo Adv	80.0
GR	319	Multi-colour Press Projects	80.0
GR	320	Process Colour Press Projects	80.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			480.0

Option: 4 Bindery

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	325	Bindery — Guillotine & 17X22 Baumfolder	80.0
GR	326	Bindery — Gathering & Adhesive Binding	80.0
GR	327	Bindery Advanced Folding 26X40 Baum	80.0
GR	328	Bindery Stitching Machines	80.0
GR	329	Bindery & Sewing Machines	80.0
GR	330	Bindery Foil Stamping & Casing in Machine	80.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			480.0

Choose 2 of the following 25 Electives — Business & Commerce

Course		Course Title	Total Hours
ACC	102	Principles of Accounting	190.0
BUS	100	Business Organization	190.0
BUS	102	Advertising	190.0
BUS	103	Finance	190.0
BUS	104	Government Administration	190.0
BUS	107	Small Business Management	190.0
BUS	108	The Psychology of Buyer Acceptance	190.0
ANAT	120	Introductory Anatomy and Physiology	190.0
BUS	130	Financial Markets	190.0
BUS	131	Retail Merchandising	190.0
BUS	140	Canadian Studies	190.0
BUS	211	Human Resources Development	190.0
BUS	212	Human Resources Management	190.0
BUS	324	Canadian Business Policy & Strategy	190.0
BUS	325	Faculty Directed Research	190.0
EDP	103	Programming I	190.0
EC	210	Economics I	190.0
EC	211	Economics II	190.0
FR	100	Conversational French	190.0
FR	101	Conversational French Advanced	190.0
MATH	215	Statistics II	190.0
PSY	161	Introductory Psychology	190.0
PSY	162	Advanced Psychology	190.0
TYP	152	Advanced Typing	190.0
TYP	900	Lumisonic Typing	190.0

Graphic Design Technician GBC code: G102

Location: St. James
Length: 2 Years (3rd Year Optional)
Certification: Diploma after 4 semesters — Special certificate for semesters 5 and 6.
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level, or equivalent. All applicants must submit a portfolio of five to ten samples and pass an art test.

Background: Credits in art from secondary school or previous training in industry or art college are desirable.

The objective of the two-year graphic design program is to graduate technicians who can create designs of the highest professional quality, and produce finished art for printing, T.V. commercials and all aspects of advertising.

During the first year, the student is encouraged to improve natural skills, to develop techniques, to research projects, to be creative, and to be aware of the suitability of work for reproduction. In the second year the student is required to assemble under studio conditions a complete portfolio of sample work ranging from design sketches to finished art and printed pieces. Students taking the optional third year may specialize in an area they wish to pursue upon graduation.

PROGRAM ROUTE: 1

Year 1 — 38 weeks

Course		Course Title	Total Hours
GD	100	Still Life Drawing	120.0
GD	101	Life Drawing	120.0
GD	102	Lettering	120.0
GD	103	Design	240.0
GD	104	Science of Colour	80.0
GD	105	Museum Techniques	120.0
GD	106	Mechanicals	120.0
GD	107	History of Art	120.0
GD	108	Illustration Techniques	120.0
GD	109	Typographical Design	120.0
			1280.0

Year 2 — 38 weeks

Course		Course Title	Total Hours
GD	201	Illustration	120.0
GD	202	Corporate Design	120.0
GD	204	Printmaking	120.0
GD	205	TV Graphics	120.0
GD	207	History of Art	40.0
GD	209	Life Drawing	120.0
GD	211	Studio Graphics	240.0
GD	212	Advertising Design	20[illegible]
GD	213	Photographic Design	120.0
			120[illegible]

Year 3 — 38 weeks

Optional 3rd Year.
In the optional 3rd year, the student will choo[se] the area in which he wishes to specialize fr[om] among the eight subject areas listed below. In consultation with the faculty of the divisi[on] courses will be selected from these subj[ect] areas to a total of 30 hrs a week. In all subj[ect] areas, except printmaking and photograp[hy] design, 3, 6, 9, 12, 15 or 18 hours a week m[ay] be selected. In printmaking and photograp[hy] design, the selection is limited to 3 or 6 hours. A variety of combinations is available within [the] overall total of 30 hours a week.

Course		Course Title
GD	302	Illustration
GD	303	Printmaking
GD	304	Package Design
GD	305	TV Graphics
GD	306	Advertising Design
GD	307	Photographic Design
GD	308	Studio Graphics
GD	309	Corporate Design

Diploma Nursing Program GBC code: NU[illegible]

Location: St. James
Length: 2 Years
Certification: Diploma
Prerequisites: Ontario Secondary Scho[ol] Graduation Diploma with credits in years 3 a[nd] 4 at, or above the general level, or equival[ent] with a minimum of two credits in science [in] years 3 and 4..
A pre-interview questionnaire, initial hea[lth] questionnaire, work reference where applic[able], academic pretest and personal intervi[ew] are also required.

The aim of this program is to prepare diplo[ma] nurses to practise nursing in the province [of] Ontario and to write the Ontario Nu[rses'] Registration Examinations.

It extends over two years and consists o[f] weeks of classes and clinical experience p[lus] seven weeks vacation, each year. The c[ur]riculum combines both nursing and gene[ral] education courses. In second year there is [an] elective — students may choose one of sev[eral] sociology courses.

PROGRAM ROUTE: 1

Year 1 — 45 weeks

Course		Course Title	Total Hours
NURS	101	Nursing Level I	122.0
NURS	102	Nursing Level I (Lab-Theory)	122.0
NURS	103	Nursing Level II	182.0
NURS	104	Nursing Level II (Lab-Theory)	70.0
NURS	106	Nursing Level III (Lab-Theory)	75.0
BIO	101	Biological Sciences "A"	135.0
HUMN	101	Humanities "A"	60.0
PATH	101	Pathophysiology & Therapeutic Interventions "A"	100.0
PSY	101	Psychology	80.0
SOC	101	Sociology	45.0
NURS	105	Nursing Level III	280.0
			1229.0

Year 2 — 45 weeks

Course		Course Title	Total Hours
NURS	201	Maternity and Newborn Nursing	154.0
NURS	202	Maternity and Newborn Nursing (Lab-Theory)	40.0
NURS	203	Medical-Surgical Nursing of Adults	154.0
NURS	204	Medical-Surgical Nursing Adults (Lab-Theory)	40.0
NURS	205	Medical-Surgical Nursing of Children	154.0
NURS	206	Medical-Surgical Nursing Children Lab-Theory	40.0
NURS	207	Psychiatric Nursing	154.0
NURS	208	Psychiatric Nursing (Lab-Theory)	40.0
NURS	209	Nursing Level V	245.0
NURS	210	Nursing Level V (Lab-Theory)	45.0
BIO	201	Biological Sciences "B"	40.0
HUMN	201	Humanities"B"	40.0
PATH	201	Pathophysiology & Therapeutic Interventions"B"	25.0
PATH	202	Pathophysiology & Therapeutic Interventions "C"	25.0
PATH	205	Psychopathology and Therapeutic Interventions	25.0
ELECT	000	Elective	45.0
			1266.0

Registered Nurse — Critical Care GBC code: NU400

Location: Nightingale
Length: 19 Weeks
Certification: Certificate
Prerequisites: Registration as a nurse in the province of Ontario; one year's nursing experience within the past 3 years.

By utilizing a holistic approach, this program prepares the registered nurse to care for the critically-ill patient with additional competence. Supervised clinical practice is selectively correlated with in-depth theory. Classes are accepted twice annually; in February and in August.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
CCCN	400	Current Concepts	20.0
HBE	400	Human Behavior Ethics and Legal Implication	20.0
ANT	400	Advanced Nursing Theory Critical Conditions	160.0
OM	400	Organization and Management	40.0
ACP	400	Advanced Clinical Practice	260.0
			500.0

Registered Nurse — Operating Room GBC code: NU401

Location: Nightingale
Length: 19 Weeks
Certification: Certificate
Prerequisites: Registration as a nurse in the province of Ontario; one year's nursing practice within the past 3 years.

This program is designed to prepare the registered nurse to be a team leader, or charge nurse, in the operating room theatre. Upon completion of this program, the nurse will also be able to give and supervise care in a recovery room where patients require close monitoring of their vital processes immediately following surgery. Classes are accepted twice annually; in February and in August.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
HBE	400	Human Behavior Ethics and Legal Implication	20.0
SOR	401	Safe Practice	40.0
ANT	401	Advanced Nursing Theory	100.0
OM	401	Organization and Management	40.0
PSI	401	Problem Solving	20.0
ACP	401	Advanced Clinical Practice	280.0
			500.0

Registered Nurse — Rehabilitation Nursing GBC code: NU403

Location: Nightingale
Length: 7 Weeks

Certification: Certificate
Prerequisites: Applicants must hold valid registration as a nurse in a province or territory of Canada and have at least one year's nursing experience. Applicants for Part II of the program, must have successfully completed Part I or an acceptable equivalent.

The Nursing division offers a two-part program in rehabilitation nursing for registered nurses, who wish to develop their understanding and skills in this aspect of nursing.

The program will be of interest to registered nurses currently working in, or planning to work in nursing homes, chronic care facilities, community nursing, rehabilitation hospitals or the rehabilitation units of general hospitals.

Options: Basic Rehabilitation Nursing
Advanced Rehabilitation Nursing

PROGRAM ROUTE: 1
Option: 1 Basic Rehabilitation Nursing
Semester 1 — 4 weeks

Course		Course Title	Total Hours
REHN	400	Rehabilitation Nursing	60.0
REHN	401	Rehabilitation Nursing — Theory	60.0
			120.0

Option: 2 Advanced Rehabilitation Nursing
Semester 2 — 3 weeks

Course		Course Title	Total Hours
REHN	403	Rehabilitation Nursing	50.0
REHN	404	Rehabilitation Nursing — Theory	40.0
			90.0

Teachers of Nursing — Long Term Care GBC code: NU404

Location: Nightingale
Length: 4 Weeks
Certification: Certificate
Prerequisites: 1) Registered nurses who have related consultant and management responsibility.
2) Registered nurses who are teaching nursing after university preparation and two years' teaching experience.

The program prepares teachers of nursing in the concepts and skills of long term care with emphasis on the elderly. These teachers would then be prepared to work from a basic model to implement programs for registered nurses in community colleges.

PROGRAM ROUTE: 1
Semester 1 — 4 weeks

Course		Course Title
NURS	400	Long Term Care of the Elderly (Practice)
NURS	401	Long Term Care for the Elderly — Theory

Registered Nurse — Neonatal Intensive Care GBC code: NU

Location: Toronto General Hospital
Length: 15 Weeks
Certification: Certificate
Prerequisites: Ontario Registered Nurse.

On completion of the program, the nurse will be expected to give high quality nursing care to the critically ill newborn, provide emotional support and teaching for the family of the high risk infant and direct and assist members of staff in the care of the sick newborn.

PROGRAM ROUTE: 1
Semester 1 — 15 weeks

Course		Course Title
NEO	400	Neonatal Intensive Care — Practice
NEO	401	Neonatal Intensive Care — Theory

Upgrading Program for Graduate Nurses GBC code: NU

Location: Nightingale
Length: 36 Weeks
Certification: Certificate
Prerequisites: Graduation from a two-year nursing program in the province of Ontario. Graduates from outside Ontario must receive a ruling from the College of Nurses of Ontario before making application.

This program is designed to assist A) Graduate nurses who require review in one or more areas before re-writing the College of Nurses Ontario examinations; B) Graduates who have failed the nursing registration examination in Ontario; C) Graduates from outside Ontario who require additional courses to satisfy Ontario registration requirements; D) Graduate nurses registered in Ontario who have not practised for a significant period of time. The students must complete a five week module reviewing the basics of nursing theory. Individual needs will determine the selection of one or more 8 week modules that combine theory and practice.

Options: Medical Surgical
Pediatric Nursing
Maternity Nursing
Psychiatric Nursing

PROGRAM ROUTE: 1
Semester 1 — 5 weeks

Course		Course Title	Total Hours
RBN	400	Review of Basics to Nursing	72.0
			72.0

Option: 1 Medical Surgical
Semester 2 — 8 weeks

Course		Course Title	Total Hours
MSN	401	Medical Surgical Nursing — Practical	83.0
MSN	402	Medical Surgical Nursing — Theory	50.0
			133.0

Option: 2 Pediatric Nursing
Semester 2 — 8 weeks

Course		Course Title	Total Hours
PEDN	401	Pediatric Nursing — Practical	140.0
PEDN	402	Pediatric Nursing — Theory	80.0
			220.0

Option: 3 Maternity Nursing
Semester 2 — 8 weeks

Course		Course Title	Total Hours
MATN	401	Maternity Nursing — Practical	90.0
MATN	402	Maternity Nursing — Theory	61.0
			151.0

Option: 4 Psychiatric Nursing
Semester 2 — 8 weeks

Course		Course Title	Total Hours
PSYN	401	Psychiatric Nursing — Practical	140.0
PSYN	402	Psychiatric Nursing — Theory	44.0
			184.0

Course Description

ACC100 Introduction to Accounting I

Accounting cycle including columnar journals, subsidiary ledgers, work sheet, adjusting and closing entries, financial statements, accounting systems and internal control, the voucher system, cash and accounts receivable, notes and interest, payroll accounting.

ACC101 Introduction to Accounting II

Inventories and cost of goods sold. Plant and equipment. Intangible assets. Accounting principles. Partnership accounting. Corporations: organization and operation; stock transactions; retained earnings and consolidations. Long-term liabilities. Accounting for investments. Departmentalization and control. Manufacturing accounting.

ACC102 Principles of Accounting

Topics include partnerships and corporations, long-term liabilities, departmental and manufacturing accounting, budgeting, cost accounting, interpretation of financial statements, managerial decisions, flow of funds, flow of cash. Emphasis will be on accounting from the point of view of management analysis and control.

ACC103 Food Cost Control

Attention is given to the use of financial data by management in decision making. Additional topics include (a) Data preparation requirements for input to an electronic system, (b) Reports and other output from the system, (c) Control problems arising from automation and procedures designed to minimize these problems, (d) Techniques for auditing electronic systems.

ACC104 Hospitality Accounting Procedures

To further develop knowledge of accounting procedures for the hospitality industry. Identify the use and necessity of uniform system of accounts. Prepare daily reports, sales data, payrolls, and cash flow statements. Techniques to control floats, take inventory, control cash and cheques, procedures for overages and shortages, internal audit, establish credit policies, credit limits and collection procedures.

ACC105 Accounting I

An introductory course designed to familiarize the student with the basic fundamentals of double-entry bookkeeping up to the preparation of a trial balance.

ACC106 Accounting II

This course covers the basic fundamentals of double-entry bookkeeping up to and including the preparation of a trial balance, and applies these principles to the bookkeeping needs of a legal form.

ACC107 Fundamentals of Hospitality Accounting

To provide the non-accounting student with a basic knowledge of accounting so that he will have the skills required to understand the results of business operations. Identify: Debits and credits, assets and liabilities, post to journals and ledgers. Close ledgers and prepare profit and loss statements and balance sheets. Carry out banking procedures.

ACC108 Purchasing for Hospitality

The development of basic inventory control, purchasing and receiving procedures; selection of supplies, anticipation of market changes, contract purchases ordering and delivery schedules; forecasting requirements, purchase specifications, control and rotation of stock.

ACC109 Accounting

Accounting cycle including columnar journals, subsidiary ledgers, work sheet, adjusting and closing entries. Financial statements. The voucher system and internal control. Cash and accounts receivable. Notes and interest. Valuation of inventories. Depreciation and depletion. Payroll accounting.

ACC110 Purchasing for Hospitality

The development of basic inventory control, purchasing and receiving procedures; selection of supplies, anticipation of market changes, contract purchases ordering and delivery schedules; forecasting requirements, purchase specifications, control and rotation of stock.

ACC111 Accounting

Maintain petty cash. Compare actual costs versus budget. Control cash receipts. Prepare deposit slips. Collect accounts receivable. Report income and expenses. Record income and expenses. Prepare records of income and expenses. Interpret profit and loss statement. Compare actual costs and revenue with budget and industry standards. Allocate costs due to resident abuse. Arrange remittance due to resident (interest of deposit) control cash flow. Interpret property assessment and taxes. Forecast rental and sundry income. Forecast operational expenses. Forecast capital expenditures. Prepare budgets.

ACC112 Food Cost Control

To provide the student with a basic understanding of techniques for the control of food cost through operating activities; food purchasing, receiving of supplies, storing and issuing. Calculation of actual food cost.

ACC151 Managerial Accounting II

Budget controls, checks and balances in the apparel plant. (48 hours)

ACC200 Financial Accounting I

The emphasis is on accounting from the point of view of management analysis and control. Topics include capital and debt structure of a limited company, analysis of financial statements and statements of sources and applications of funds, taxes and their influence on business decisions, budgeting and its use by management for planning and control.

ACC201 Management Information Systems

This course is designed to familiarize the student with (a) the information needs of management, (b) reports issued to management for decision making, (c) information systems for collection of data, and (d) the principles and philosophies involved in systems design and installation.

ACC202 Cost Accounting I

The aims of this course are (a) to teach the basic concepts and principles of cost accounting, (b) to teach the concepts of material, labour and overhead as applied to cost accounting, (c) to develop cost accounting techniques to be applied to the solution of problems and case studies.

ACC203 Financial Accounting II

The aim of the course is to familiarize students with management accounting through the application of financial accounting. Topics include changes in working capital, statements of cash flows, break-evens, variables, analysis measurements, ratios, short and long-term budgets, present value of cash flows and comparison of long range alternate plans, return on capital.

ACC204 Cost Accounting II

The aims of the course are (a) to develop and expand on the cost accounting principles introduced in ACC202, (b) to develop costing techniques for budgeting control of material, labour and overhead, (c) to teach the principles of process cost accounting and cost of production reports, (d) to instruct on the preparation of budgets; also cash flows, commercial expenses and forecast statements.

ACC205 Auditing

Principles and practices of auditing, with particular emphasis on the understanding of good system's design and the evaluation of internal control. Year-end verifications of assets and liabilities.

ACC206 Taxation

Income Tax Act and its regulations. Preparation of individual and corporate tax returns. Taxation theory.

ACC208 Food Cost Control

Further control through establishment of production standards; yield tests, production forecasting and planning. Techniques to minimize waste through effective use of overproduction. Calculation and establishment of standard or potential food cost. Report and maintain daily records of food sales and cost. A series of food control systems and their suitability to variable sizes of food operations.

ACC210 Food & Beverage Cost Control

An extensive study of the two aspects of food and beverage cost control; the system records control and the management of employee production. Purchasing, receiving, storage and issuing controls. Further control through portion standardization, forecasting, use of leftovers, standard recipes and production schedules.

ACC211 Payroll Analysis and Control

Maintain petty cash. Compare actual costs versus budget. Control cash receipts. Prepare deposit slips. Collect accounts receivable. Report income and expenses. Record income and expenses. Prepare records of income and expenses. Interpret profit and loss statement. Compare actual costs and revenue with budget and industry standards. Allocate costs due to resident abuse. Arrange remittance due to resident (interest on deposit) control cash flow. Interpret property assessment and taxes. Forecast rental and sundry income. Forecast operational expenses. Forecast capital expenditures. Prepare budgets.

ACC212 Secretarial Accounting (Introductory)

Maintain petty cash. Compare actual costs versus budget. Control cash receipts. Prepare deposit slips. Collect accounts receivable. Report income and expenses. Record income and expenses. Prepare records of income and expenses. Interpret profit and loss statement. Compare actual costs and revenue with budget and industry standards. Allocate costs due to resident abuse. Arrange remittance due to resident (interest on deposit) control cash flow. Interpret property assessment and taxes. Forecast rental and sundry income. Forecast operational expenses. Forecast capital expenditures. Prepare budgets.

ACC213 Accounting

ACC214 Medical Accounting (Introductory)

This course covers the fundamentals of double-entry book-keeping up to and including the preparation of a trial balance and applies these principles to the book-keeping needs of the medical profession.

ACC215 Legal Accounting (Introductory)

This course covers the fundamentals of double-entry book-keeping up to and including the preparation of a trial balance and applies these principles to the book-keeping needs of the legal profession.

ACC216 Managerial Accounting III

How a corporation is financed to do business - bank loans, Sec. 88 etc. (48 hours)

ACC217 Labour Cost Control

Controlling labour costs by a system of forms and procedures, job analysis, work and time schedules, work performance ratios, schedules and sales charts, payroll authorization form.

ACC218 Financial Management for Hospitality

Fundamental accounting and organzational studies of standardized accounting systems for

the hospitality industry. Evaluation of types of business structures, leasing and purchasing criteria, and the preparation and implementation of budgets and capitalization. Analysis and control of original and final books of entry, return on investment and sources of capital. Refining the language and skills of management information systems.

ACC332 Managerial Accounting IV

Inventory control — costing pricing for apparel plants. (32 hours)

ACOU200 Environmental Acoustics

A basic course in sound science: A review of the physics necessary to provide a background to the physics of sound; physiology of the ear; hearing; psychology of hearing. An introduction to the measurement of sound and noise; hearing protection; audiometry.

An examination of federal, provincial and municipal laws, building codes and noise abatement standards; workmens' compensation laws re — hearing protection, hearing loss and deafness — case studies.

ACOU201A Sound and Vibration Analysis

A detailed study of the construction, use and maintenance of the instruments for the measurement and analysis of sound and noise; the techniques of measurement, analysis and reporting of sound and noise.

ACOU201B Sound and Vibration Analysis

A detailed study of the construction, use and maintenance of the instruments for the measurement and analysis of sound and noise; the techniques of measurement, analysis and reporting of sound and noise.

ACOU211A Noise Control I

The acoustic aspects of architectural design: transmission of sound through walls, floors and cellings; reflection of sound in rooms, reverberation, absorption, echo and whispers, acoustical control of airborne sounds throu room and building design.

An examination of the reflective and absorpti properties of common building materia architectural and industrial sound and no control materials; materials and objects used interior decorating and office landscaping.

ACOU211B Noise Control II

An examination of the mechanical systems in building; the generation, transmission and co trol of noise from heating and air-conditioni systems; water and plumbing noise. Rotodynamic noise.

A detailed study of vibration, low frequen noises and noises of short duration - impa noises: the construction, use and maintenan of the instruments for the measurement a analysis of vibration and shock; and examin tion of the technique of shock and vibrati control.

ACOU213A Acoustics Laboratory

A workshop on the measurement, analysis a control of sound, noise and vibration; measur ment of ambient noise levels indoors and o doors; noise zones and surveys; measureme and analysis of vehicular, construction and dustrial noise; noise from consumer produc control of airborne and transmitted noise buildings; measurement and control of vibr tion, impact noise and rotodynamic noise.

ACOU213B Acoustics Laboratory

A workshop on the measurement, analysis a control of sound, noise and vibration; measur ment of ambient noise levels indoors and o doors; noise zones and surveys; measureme and analysis of vehicular, construction and dustrial noise; noise from consumer produc control of airborne and transmitted noise buildings; measurement and control of vibr tion, impact noise and rotodynamic noise.

ACOU214A Acoustic Systems Design

Review of drafting fundamentals. Architectu and structural symbols and conventions. St

of national building codes. Preparation of work- ing drawings as related to acoustics. Materials used in construction.

Mechanical drawing techniques including sym- bols and conventions for layouts of heating, ventilating, air conditioning, plumbing, piping and electrical systems as used in building con- struction with special attention to acoustical problems, materials used in construction.

ACOU214B Acoustic Systems Design

Review of drafting fundamentals. Architectural and structural symbols and conventions. Study of national building codes, preparation of working drawings as related to acoustics. Materials used in construction.

Mechanical drawing techniques including symbols and conventions for layouts of heating, ventilating, air conditioning, plumbing, piping and electrical systems as used in building construction with special attention to acoustical problems. Materials used in construction.

ACP400 Advanced Clinical Practice

Students apply their knowledge and gain skill in caring for patients in the intensive care unit, the coronary care unit, the renal unit, and the neurological unit.

ACP401 Advanced Clinical Practice

During the surgical cycle students apply their knowledge and gain skill in caring for patients in the pre-operative, operative, and post-operative phases.

AD100 Field Practice

Field practice is an integral part of the program in affording students supervised clinical experience in a variety of settings. Field experience is considered an essential concomitant to the behavioural sciences.

AD101 Human Growth and Behaviour

A sequential view of the process of human growth and personality development as a means to develop some understanding of the physical, socio-cultural and emotional aspects of development throughout the life span.

AD102 Group Process

Students meet regularly in a group seminar, thus experiencing the dynamics of group interaction. The group process is used as interpretive behavioural material.

AD103 Social Issues Problems and Services

A study of the development and adaptation of institutions in response to community needs and pressures. Levels of responsibility: federal, provincial, municipal and private. The development of agencies providing education, health, welfare and other forms of service. Philosophies concerning the role of law in controlling alcohol and drug use, and the relevant legislation.

AD104 Pharmacology & Physiology (Half Course)

Pharmacology: The program should provide students with information and experience which will alter their attitudes and values toward the use of drugs in such a way that patients in turn will be influenced to improve their attitudes toward drugs through the natural interchange of thought occurring in treatment sessions. Physiology: Basic concepts of anatomy and physiology; How the body is involved with drugs and how it functions with and without their influence.

AD105 Basic Studies in Addiction

A study of mind altering drugs. Why man uses drugs; religious, medical, enhancing and recreational, study of the chemophilic age.

AD106 Theory Methods and Practice of Therapy

A study of the therapeutic procedures and

treatment philosophies related to personality patterns: Freudian theories of personality development will be used as a base from which to analyse the development of current treatment philosophies including those of Adler, Jung, Erikson, Rogers, individual group and family therapy will be demonstrated.

AD112 Field Work Seminar

This seminar provides an opportunity for students to share learning experiences obtained in various field work settings.

AD200 Field Practice

Continuation of AD100.

AD201 Human Growth and Behaviour

A sequence of AD101. The emphasis here is on abnormal development and dysfunction.

AD202 Group Process

Continuation of AD102.

AD206 Theory Methods and Practice of Therapy

Continuation of AD106.

AD206X Practice & Method Counselling

Case presentations are used to further develop an understanding of the counsellor role and the choice of counselling activities through the beginning, middle and ending phases of treatment. Resistance, plateaus, recontracting, prognosis and evaluation are included.

AD208 Values Ethics and Professionalism

The purpose of this course is to encourage study and examination of the values and value conflicts involved in being a counsellor and how these values relate to professional pra tice.

AD209 Research and Independent Studies

A study of research models and their appli tions; critical appraisal of research resu Students will conduct a study in a related a of special interest to them.

AD211 Community Practice

Application of the therapeutic "Growth" Mo to community problems and dysfunction.

AD212 Field Work Seminar

The seminar provides for the third year pr time student an opportunity to integrate academic and the practical through sharing periences, demonstration of treatm modalities unique to the agency, role playin break blocks in relationships and other periential exercises. The opportunity for c solidation of the years is important.

ADM100 Administration

This course is designed to acquaint the den assistant with the various procedures involv in the organization and efficient manageme the dental office. The curriculum inclu records and accounting, banking, and surance claims.

ADM101 Administration Practice in Fitness Education

This course develops the organizational sk involved in the running of a recreational p gram.

ADM108 Administration

This course is designed to acquaint the den assistant with the various procedures involv in the organization and efficient manageme the dental office. The curriculum inclu

records and accounting, banking and in surance claims. (30 hrs.)

ADM200 Administration Practice in Fitness Education

This course is designed to enable the students to select one of three areas of his or her interest and in turn apply themselves to the development of this area.

The areas of selection are:
(1) Communication Arts
(2) Research Skills
(3) Recreation Program Development

AIR100 Refrigeration

Effect of heat; expansions of solids, liquids and gases, change of state, latent vs. sensible heat. Heat measurements; basic system compo nents; construction and use of pressure - enthalpy diagram; interelationship of system components using pH diagram. Types of con densers; importance of head pressure control; air side and refrigerant side methods, system operating controls; system safety controls.

AIR105 Air Conditioning

Review of basic principles of physics pertain ing to air conditioning; air and human comfort, factors affecting comfort of human beings. Use of psychrometric chart. Effects of external and internal shading devices. Basic heating and cooling load calculations by various methods and for various types of structure. Principles of distribution system design for various types of residential application. Introduction to ventila tion and use of the equal friction chart.

AIR106 Estimating for Air Conditioning

Take-off mechanical drawings for duct work, piping layouts and machine room layouts. Bill of materials and costing for air conditioning of a commercial building and preparation of a sales proposal.

AIR107 Hydronic Heating

Characteristics of heat, body comfort, and con struction materials. Heat loss calculations by I. B. R. "Detailed" and "Modern" methods. Types of hydronic systems and component characteristics. Design of systems.

AIR108 Instrumentation

Use of instruments used in the operation and testing of heating, cooling and air conditioning systems.

AIR109 Electrical Fundamentals

Fundamentals of electricity as applied to heating, cooling and air conditioning systems.

AIR200 Refrigeration

Use of manufacturers data to select cooling towers and related equipment. Study of unitary, commercial industrial equipment, heat pumps. Use of psychrometrics chart in the selection of cooling coils, refrigeration piping practice, sizing of refrigeration piping for allowable pressure drop and oil return to the compressor. Continuation of laboratory work of first year in system construction and analysis, testing, operating reports.

AIR201 Automatic Controls

Electric control circuits: Two wire control circuits, three wire control circuits, floating and proportional control circuits. Electronic control circuits, electronic control units, and pneumatic control units. Commercial control systems: zone control for heating, control of unit heaters and ventilators, control of commercial vented fan heating and cooling systems, control of peripheral air conditioning units.

AIR203 Air Conditioning Systems

Heating and cooling load calculations. Use of psychrometric chart. Air quantities for cooling requirements; effect of storage zoning, and pendulum effect, equipment selection. Central station: chillers, coils, heating and cooling, fans, refrigeration, unitary equipment. Water and air cooled rooftop units. Split systems. High pressure dual duct and induction systems: Noise and vibration control.

AIR205 Estimating

Take-off mechanical working drawings for duct work, piping layouts and machine room layout. Bill of materials and costing for air conditioning of a commercial building and preparation of sales proposal.

ANAT100 Anatomy and Physiology

This is an introductory course in elementary human anatomy and physiology taught with emphasis on the spelling of normal terms and their meaning in context. There is some laboratory work.

ANAT101 Anatomy and Physiology

This is an introductory course in the study of common abnormal conditions taught with emphasis on the spellings of medical terms and their meanings in context. Prerequisite is ANAT100.

ANAT102 Dental Anatomy

A lecture and laboratory course designed to teach the student basic dental terminology, the four major notation systems, the development structure and function of teeth and their supporting tissues, the eruption chronology of both dentitions, the functional relationships of the dental structures, and variations and anomalies of dental anatomy. (30 Hrs.)

ANAT103 Dental Anatomy

A lecture and laboratory course designed to acquaint the student with the detailed structure and function of the oral and dental tissues. The anatomy of the dentition is presented through laboratory exercises. (64 Hrs.)

ANAT104 Gross Anatomy

This series of lectures cover the musculature and skeletal anatomy that is required by the O/P technician. Bony landmarks used in measurement criteria are especially emphasized. Cells, tissue and bone with an overview of major body systems are also covered. (32 Hrs.)

ANAT105 Anatomy

Emphasis is given to a strong basis in skeletal, articular and muscular systems of human body. The course provides a bridge between functional anatomy and kinesiology.

ANAT120 Introductory Anatomy and Physiology

ANAT201 Anatomy & Physiology (Medical Terminology-I)

Plant layout including inventory control, shipping room; scheduling shifts, co-ordination section; transporters, etc.

ANAT203 Anatomy & Physiology (Medical Terminology-II)

ANAT204 Anatomy-Head & Neck

This course concentrates on a comprehensive study of the gross anatomical structures of the head and nect. The skeletal structure, musculature, nervous system, lymph and blood supply are detailed with particular emphasis on the dental implications (30 Hrs.) The basic physiology of man and especially the physiology of the oral cavity is presented in conjunction with the anatomy program.

ANAT205 Advanced Dental Anatomy

A continuance of ANAT102, the structure of the dentition is reviewed and the perspective of occlusal harmony is introduced. Students, in laboratory exercises, develop an understanding of the physiological basis of masticatic (15 Hrs.)

ANAT300 Anatomy & Physiology

A comprehensive course to give the prospective orthotist prosthetist an in-depth study of the anatomy of the heart, systemic circulation (arteries and veins), and pulmonary, coronary, and cerebral circulation. Also lectured is the anatomy of the C.N.S. and with it spinal cord and spinal nerves, and a general basic anatomy of the intestinal tract, liver, gall bladder, pancreas, urinary system and skin.

Physiology of the heart, blood pressure, respiration motor and sensory pathways, autonomic nervous system is covered. Basic physiology of digestion, metabolism, electrolyte and acid base balance and homeostasis concludes the course. (48 Hrs.)

ANT400 Advanced Nursing Theory Critical Conditions

Building on a broadened and deepened understanding of pathophysiology and of therapeutics, students gain knowledge essential for skilled nursing intervention in the care of the critically ill patient.

ANT401 Advanced Nursing Theory

Focuses on the role of the nurse as a support to the patient undergoing surgery, and as a skilled member of the team carrying out the surgery.

AQUA100 Aquatic Skill Development

This course will offer instruction towards the Royal Life Saving Society 8 bronze medallion - as well as mechanical principles involved in swimming, training techniques and water exercises.

ARCH100 Materials and Methods

The manufacture and use of cement, steel, brick, clay, wood and other building products.

ARCH101 Codes and Regulations

A study of the national and the Ontario building code and municipal by-laws as they apply to residential construction.

ARCH200 Materials and Methods

Advanced methods and applications of building materials and products.

ARDR100 BPR & Elementary Drafting

Introduction to construction through plan interpretation and elementary drafting for light construction.

ARDR101 Architectural Drafting

Drafting exercises in architectural principles and problems leading to an integration with other courses such as building construction and design and planning. Free-hand sketching, perspective.

ARDR102 Architectural Drafting I

Preparation of working drawings of plans, sections, elevations and details of frame and masonry construction; perspective drawings; rendering and model making.

ARDR103 Architectural Rendering and Presentation

Perspective drawing, rendering and model making.

ARDR104 Architectural Design and Planning

Building project-clients, planning of space and circulation. Building codes, types of construction, site planning.

ARDR106 Architectural Drafting I

Introduction to dimensions, symbols and conventions; methods and materials for light construction; study of the national building code, in conjunction with the preparation of working drawings.

ARDR107 Mechanical Installation Drafting I

Mechanical drawing techniques of plumbing, drainage, types of hot water heating, air handling, and water supply.

ARDR108 Structural Drafting I

Structural steel: Design of simple beams, simple connections, detailing practices. Reinforced concrete: framing plans; detailing beams, slabs, walls, bar schedules.

ARDR109 Electrical Installation Drafting I

Studies of residential, commercial and industrial wiring systems in single and three-phase layout.

ARDR111 Mechanical Installations Drafting I

Mechanical drawing techniques of plumbing, drainage, heating, air conditioning and electrical layout pertaining to building construction.

ARDR112 Drafting

Three-view drawing, alphabet of lines, dimensioning, sections, free-hand sketching, isometric drawing. Introduction to architectural drawing, types of construction, materials and structural members.

ARDR115 Structural Drafting

Interpretation and preparation for design drawings of structural steel and reinforced concrete structures.

ARDR120 Descriptive Geometry I

Theory of multiview projection; auxiliary views; points, lines and oblique surfaces in space; true length and true shape considerations; edge views, slopes and angles.

ARDR121 Descriptive Geometry

Orthographic projection, isometric sketching, auxiliary and revolution methods, practical applications.

ARDR124 Drafting

The principles of engineering draw... geometrical construction, orthographic... onometrics, and oblique projection, dimen... ing, sections and auxiliary views. Readin... architectural plans, introduction to piping... duct layout for ventilation, heating and air... ditioning systems. Graphical representatio... electrical wiring diagrams.

ARDR154 Art and Presentation

Freehand sketching, pictorial drawing, tec... cal illustrating and model making.

ARDR200 Design & Planning

Short history of architecture, analysis of p... ning, structure, services, aesthetic qua... landscaping.

ARDR201 Final Design Project

An illustrated individual report based... architectural drafting practices and plann... Must be presented for making as part of sec... year design course.

ARDR202 Architectural Drafting II

Presentation and working drawings of comm... cial and institutional buildings, utilizing up... date procedures from actual case studies.

ARDR220 Descriptive Geometry II

Plane surfaces, intersections relating to li... planes and figures, dihedral angles, rev... tions, parallel and radial line developm... triangulation and vectors.

ARDR221 Descriptive Geometry

Practical problems and drawing practices ... volving lines, planes, angles, intersections ... curves.

ARDR228 Air Conditioning and Refrigeration

Principles of refrigeration, types of systems, ...stem design, combination systems.

ARDR229 Heating Systems

Principles of operation, types of systems, ...stem design, fuel supply.

ARDR230 Plumbing Systems

Principles of design of various systems, includ... ...g materials and methods.

ARDR232 Drafting

...stems of piping drawing, including piping ...mbols with drawing and sketching in ...ultiview, isometric and oblique. Duct layout ...owing graphical symbols for heating, ven... ...ating, air conditioning, plumbing, piping, ...lves and fittings. Reading mechanical ...chitectural and structural plans.

AT100 Work Management I

Methods, time and motion studies with ...mphasis on sewing and cutting operations. ...4 hours)

AT101 Work Management II

Standard data (sewing machine operators) - ...ork station design and efficiency. (48 hours)

AT131 Computer as a Management Tool

Understanding of how computer is used as a ...ol to assist records and planning in apparel ...erations. (32 hours)

AT141 Personnel & Industrial Relations

...ffective supervision, communications, per... ...nnel structure and reporting job specifica... ...ns. (64 hours)

AT151 Needle Trade Technology III

Seaming and the machines — construction of various seams — tensions — threads — needles, etc. (48 hours)

AT152 Needle Trade Technology II

Some mechanics of sewing machines; history; justifying purchase, variations, efficient uses and common repairs. (32 hours)

AT153 Needle Trade Technology

Advanced systems of work measurement, including time study, standard data and a variety of incentive systems.

AT161 Operator Training I

Includes sew 141, plus techniques for training production employees, single-needle sewing machine; selection, orientation, evaluation of operators and cutters (performance objectives). (64 hours)

AT163 Personnel & Industrial Relations IA (Train)

Methods of training sewing machine operators.

AT171 Personnel & Industrial Relations III

Human relations as practiced in the efficient apparel plant and workroom; division of work and work loads; scheduling, etc. (48 hours)

AT172 Managerial Organization III

Labor management and relations; unions, Provincial Industrial Standards Act. Minimum wages, rating employees, etc. (48 hours)

AT173 Personnel and Industrial Relations

Labour - management negotiations - agreements, industrial action. (48 hours)

AT174 Managerial Organization

Theories of behavioural psychology and applications at supervisory level.

AT175 Personnel & Industrial Relations

Labour laws of Canada

AT192 Managerial Organization

Plant structure, lines of responsibility. (32 hours)

AT200 Garment Analysis IV

Job sequence, cost and materials management. (32 hours) In cutting room, sewing room, etc. Materials management. (32 hours)

AT201 Needle Trade Technology VI

Fundamentals of apparel plant layout and design, work flow, etc. (32 hours)

AT211 Apparel Merchandising III

Merchandising apparel at retail.

AT211A Apparel Merchandising

AT211B Apparel Merchandising

AT221 Apparel Merchandising III

Major principles in designing, merchandising, and selling a line in men's and ladies' wear.

AT222 Apparel Merchandising

Apparel seasons, cycles, planning a line, etc. (48 hours)

AT230 Personnel & Industrial Relations

Managing staff, motivation, supervision employees.

AT232 Apparel Merchandising

Continuation of AT222 for succeeding semester - merchandising a line.

AT241 Managerial Economics III

Analysis of import problem facing the Canadian apparel industry, export opportunities, trade theories and procedures.

AT251 Marking & Cutting

Marking and cutting procedures; spreading machines; techniques of laying out fabric, marker-making (mechanical and electronic). (48 hours)

AT251A Cutting

AT252 Garment Analysis III

Apparel construction sequences (men's, women's, children's wear); quality control; introduction to sophisticated machinery (numerical control, computer assisted, etc.). (32 hours)

AT254 Computer as a Management Tool

AT261 Apparel Merchandising IV

Case studies of various successful apparel merchandising strategies — guest lecturers.

AT262 Needle Trade Technology III

Prerequisite: AT151 or industrial experience. (32 hours)

AT271 Managerial Organization IV

Manufacturing costing, estimating, forecasting, principles of budgeting, inventory control. Foremen, etc. (32 hours)

AT272 Personnel and Industrial Relations III

Techniques of management including "Management by Objectives" (MBO). (32 hours)

AT273 Delivery Schedules

Loading and balancing factory production to maximize shipability of production in the face of production requirements, fabric restraints and customer deadlines.

AT320 Large Plant Problems

Problem solving specifically related to plants with over 100 operators; case histories, role-playing. (64 hours)

AT350 Automated Machinery

Numerical controlled (N/C) sewing machines; special machines; pneumatic aids; computer aids in sewing, pattern-marker and grading, (practice). (64 hours)

AT370 Multi-plant Problems

Problem solving specifically related to companies with more than one plant; feeder plants; vertical and horizontal structure; international operations and their problems; case studies. (64 hours)

AT373 Delivery Schedules

International shipping - warehousing. (64 hours)

AUD300 Audit Relevant Courses-Course Projects

Select with advisor's consent. (48 hours)

AUD350 Audit Relevant Courses

For Watchmakers select with advisor's consent. (48 hours)

AUD351 Audit Relevant Courses-Course Projects

Select with Advisor's Consent. (48 hours)

BESC100 Behavioural Science

A course which is designed to apply previously learned concepts in social psychology to the field of dentistry. Topics of discussion will include the social and psychological significance of the mouth and face and fixed and removable prostodontics, public attitudes towards dental health. Dentists and Dental Auxiliaries, the Fluoridation Issue, Management of Fear in the Dental Environment, Types of Patients, Understanding Human Behaviour and Developing Effective Communication Skills. (30 hours)

BESC101 Behavioral Science

Basic behavioral science concepts and principles are applied to the field of dentistry. Psychological aspects of dental disease, the preliminary examination, periodontics, orthodontics, fixed and removable prosthodontics and temporomandibular joint and neuromuscular dysfunction will be discussed. During the course emphasis will be on developing communication and behaviour management skills to enable the students to effectively carry out their responsibilities in the work force. (51 hours)

BIO101 Biological Sciences "A"

This course is the study of Anatomy, Physiology and Microbiology, to provide the student with knowledge of structure, processes, activities and phenomena of the human body as well as characteristics and organization of micro-organisms, and their relationship to man. (135 hours)

BIO102 Human Biology

This course, lectured in the first year, consists of a series of lecture-demonstrations on the

major systems of the human body. The bone structure, musculature, blood supply, lymphatics and innervation systems are considered in detail. The basic physiology of man is presented in conjunction with the anatomy program. (64 hours)

BIO104 Microbiology

This course consists of the study of micro-organisms, the process of infection control and sterilization procedures, and the relationship of oral micro-biology to Dental Health. (17 hours)

BIO106 Biology

The components of the circulatory, respiratory and muscular systems will be covered.

BIO107 Biology

This course is lectured in the first year of the Dental Technology Program and is intended to provide the student with a comprehensive insight into the Animal Kingdom and the position of man within that kingdom. Invertebrate and Vertebrate Zoology, a discussion to the major systems of Man, Cell, and Tissue Biology and principles of Biochemistry are the major areas for discussion. (64 hours)

BIO200 Food Microbiology

An introductory course in Food Microbiology with emphasis on Bacteriological Techniques.

BIO201 Biological Sciences "B"

The physiological and psychological processes occurring during the maternity cycle are the focus of this course, along with the physiological changes occurring in the neonatal period. Also included is assessment and medical management utilized in the maternity cycle and neonatal period. (25 hours)

BIO302 Biomechanics & Kinesiology

This course lectured in the optional third year is insight into human locomotion specifically related to musculature and the skeletal syste Its contents are a revision of mechanics w specific application to the human system study of statics and dynamics of body moti particular to gait. Consideration of statics a dynamics in Prosthetics especially alignme criteria. Interface parameters between bo tissue and O/P devices, physiological effe tissue loading, and the application Kinesiology in Orthotics and Prosthetics. T student will also be encouraged to critica evaluate selected scientific literature. (5 hours)

BUS100 Business Organization

This subject covers primarily areas of busine not otherwise covered in the Business Adm istration Program. Contemporary busine issues are analyzed to indicate the relevance theories and to prepare the student for the b iness world. The Canadian Business scene highlighted in terms of content, personaliti corporations and institutions. Students les the generalists' multidisciplinary approach.

BUS101 Human Relations

An introduction to the fundamental princip of Human Relations; an analysis the h general nature of man as viewed from vario thinkers, sciences and disciplines such a philosophy, psychology, economics, politic science, theology, sociology, music, poetry, a modern business management theories, a an elementary examination of such topics a Who am I (Self-Awareness); effective co munications; effective listening. Students a encouraged to read, research books, perio cals, and to develop a deeper appreciation t all knowledge is potentially valuable as an sight into Human Relations and Huma Behaviour.

BUS102 Advertising

BUS103 Finance

BUS104 Government Administration

An introduction to the organization and fun tions of Municipal Government in Ontario, w special emphasis on the City of Toronto and the Metropolitan TOronto Corporation. The course will analyze both the political and bureaucratic structures of Civic Government, with some reference to changing urban politics and their ongoing effect on municipal policy and administration.

BUS107 Small Business Management

Sound Business Management involves planning of the budget, having a reliable banking relationship, setting up of accounts and proper business communications. In order to operate for profit, it is necessary to control the business according to plans, to advertise and promote sales, to understand competition, mark-up and pricing for sales profits.

BUS108 The Psychology of Buyer Acceptance

BUS109 Job Site Management I

Management, coordination supervision and control of various job site activities as per Dacum pg. 48.

BUS110 Legal, Medical & General Terminology

BUS111 Court Procedures

BUS112 Current Events

BUS113 Legal, Medical & General Terminology

BUS114 Fieldwork in the Courts

BUS115 Current Events

BUS130 Financial Markets

BUS131 Retail Merchandising

The key to successful retailing is offering the right products at the right price. Following a review of market segmentation to identify the wants of prospective customers, the course concentrates on buying methods and organization; pricing, including workup, stockturn and budgeting; stock control and retail promotion.

BUS140 Canadian Studies

BUS200 Job Site Management II

Management, coordination, supervision and control of various job site activities as per Dacum pg. 48.

BUS202 Promotional Management I

Market definition; attitudes, opinions and beliefs, product analysis; analysis of communications, media, and sales promotion; strategies and media execution; organization of advertising, principles and techniques of advertising and sales promotion.

BUS203 Promotional Management II

Company image, public relations objectives, strategy, media and community relations, planning and supervising public relations programs. Techniques of publicity.

BUS204 Urban Development Policy Strategy

Overall company policy, objectives and strategy resource allocation and budgeting, development and interrelationships, decision-making simulation.

BUS211 Human Resources Development

Prerequisite: Human Relations (BUS101)

An examination of human relations and organizational behaviour with special emphasis in developing a student's personal ability in effective leadership and supervision.

The essential theme of this course is that we must first learn to manage ourselves (self-knowledge) before we can supervise, direct, manage or motivate other human beings.

BUS212 Human Resources Management

Principles of Human Resource Management, acquisition, selection, training, motivation of personnel, individual and group behaviour, leadership styles, organizational structures.

BUS215 Media Applications

Students will learn how to use oral and written media in obtaining employment. Students will learn principles and techniques which can be used in on-the-job professional development. Emphasis will be on individual assignments and group activities, the course leader provides personal counselling and coaching.

BUS216 Business-Government Relations

Students will learn about the total environment in which a firm must operate. They will be made aware of the government agencies through which they must work, and will develop a working knowledge of documentation and procedures necessary to work effectively with government.

BUS217 Purchasing & Inventory Control

This course will acquaint the student with the principles of purchasing, arranging contracts (negotiations) and effective control of the flow, volume and disposition of inventory.

BUS218 Financial Management Planning & Control

This course will acquaint the student with proper procedures for financial accounting, nancial statement analysis and control.

BUS219 Law III, Real Estate & Development

This course introduces the student to significant legislation affecting residential housi and an understanding of the legal procedu involved in a development project.

BUS221 Financial Management

BUS233 Word Processing and Dicta

BUS234 Word Processing and Dicta

BUS300

BUS320 Organizational Behaviour

Students will learn the theories and practice formal and informal networks of communic tions, individual and group dynamics, authori and power structures, problem solving, de sion making, motivation and leadership, t organizational structure and its internal and e ternal environments.

BUS321 Financial Management

The full range of financial decisions whi must be taken in modern business is examine Emphasis is on Candian Business Finan Practice in the areas of raising funds for sho medium and long term need and the efficie management of such funds. The major top areas include investment decision makin

long, medium and short term sources of funds; the Canadian Monetary System; financial analysis and control; working capital management and expansion.

BUS322 International Business

Students examine international trade, Euro dollar and Euro currency markets, foreign exchange markets, multi-national and international companies, the world bank and international balance of payments, contemporary Canadian oriented examples are utilized.

Student research projects examine international business roles of federal and provincial government agencies and Canadian multinational companies.

BUS324 Canadian Business Policy & Strategy

This course deals with the process of policy formation and strategic planning and its relationship to the total business organization. The nature of the Canadian Business environment will be analyzed with respect to the legal, political, economic and social constraints acting on the firm. A detailed discussion of the social responsibility and ethics of business will also be included. Substantial use will be made of computer simulations and case studies.

BUS325 Faculty Directed Research

The primary purposes of this course are to ensure that the student maintains or enlarges his knowledge in the area of major study (option) taken in previous semesters, and to develop the self-discipline required to work without close supervision.

The student works with a member of the faculty to decide upon a major project in the student's area of expertise, which the student carries out as an out-of-class assignment, using the faculty member as a guide and resource person.

BUS332 Managerial Accounting

Application in Apparel Industry I and II. (64 hours)

BUS407 Medical and General Terminology

This course is designed to familiarize the student with the terminology likely to be encountered in courts of law.

BUS408 Court Procedures

The purpose of this course is to familiarize the student with the duties performed by a court reporter and the manner in which a court functions.

BUS409 Current Events

A good reporter is well-read and well-informed. This course is designed to keep the student abreast of the latest developments in politics, science, and the business and medical worlds.

BUS410 Current Events

See Course Description for BUS409.

BUS411 Field Work in the Courts

During the semester the student will work with a reporter in the courts. The court reporter will evaluate the student's work.

BUS412 Legal, Medical and General Terminology

An advanced version of BUS407.

CCCN400 Current Concepts

Focuses on the holistic approach which emphasizes that interventions in one system produce effects in related systems.

CER101 Ceramics

Wheel techniques, hand building, glazing, decorating and kiln work. (60 hours)

CER101A Ceramics for Furniture Students

Making tiles and accessories for furniture.

CER151A Ceramics for Furniture Students

Accessories for furniture, glazes, etc.

CER201A Ceramics for Furniture Students

Advanced ceramics for use with furniture.

CER251 Ceramics

Continuation of advanced ceramics for studio work — decorations. Projects include ovenware, large pot forms and sculptured work.

Advanced classes for CER201. (60 hours)

CHEM100 Applied Chemistry

Physical and Chemical changes: kinetic and atomic theory; chemical bonding; reactions; equations; periodic table; solids, liquids and solutions, reaction rates; chemical equilibrium; solubility, acids and bases; pH problems, electrochemical and nuclear chemistry; organic chemistry; experiments.

CHEM100X Chemistry (General)

Methods of Chemistry: physical and chemical changes, chemical terminology. Organic chemistry: structure and reactions of common alphatic groups. States of matter: gas laws, partial pressure. Nuclear chemistry: basic nuclear particles, isotopes, radioactivity, half life, radioisotopes and uses. Equilibrium; rate of reaction, reversibility, LeChatelier's Principle, equilibrium constancy, solubility and concentration, ion exchange. Acidimetry and hydrolysis: definitions, pH indicators, titrations, relation to oxidation and reduction. Electrochemistry, electrolysis, Faraday's Law, electrochemical series, corrosion.

CHEM102 Biochemistry of Exercise

The students will investigate the chemical nomenclature and properties of carbohydrates, fats and proteins. Emphasis will be placed on the contribution of carbohydrates, fats and proteins to anaerobic and aerobic system encounters during exercise.

CHEM105 Chemistry

Fundamentals of Chemistry; mixtures and substance, acids, bases; neutralization and pH measurements; chemistry of photography and papermaking; inks and pigments; driers and additives; formation and structure of ink films, solvents and binders; plastic materials and processes; colour and colour matching.

CHEM107 Chemistry and Science of Dental Material

This course provides the student with an intense study of the chemistry of the materials utilized in the dental laboratory. Subjects covered in the course work include the fundamental particles of matter, physical, and mechanical properties of dental materials and impression materials. (64 hours)

CHEM168 Chemistry I

Atomic theory; symbols; formulae; bonding, molecules and ions; acids and bases; corrosion; electroplating; precious metals, inorganic solvents; organic chemistry; structural formulae; applications of organic chemistry in fields of plastics and organic solvents.

CHEM168A Chemistry II

CHEM168B Chemistry II

CHEM200 Industrial Chemistry & Equipment

Unit operations: distillations, evaporation, solvent extraction, filtration, gas absorbtion, electrolytic separations and electorpolating, chemical equipment involved in each operation. Specific industries: oil paints, soaps and detergents, pulp and paper, textiles, steel, plastics. This course provides the student with an intense study of the chemistry of the materials utilized in operative dentistry. Subjects covered in the course include the physical and mechanical properties of restorative and impression materials. (32 hours)

CHEM208 Chemistry of Dental Materials

This course is concerned with organic chemistry. Areas of concentration include the hydrocarbons and other organic compounds, polymerization and the role of polymers in Dentistry. (64 hours)

CHEM210 Polymer Chemistry

Basic concepts of polymer science. Molecular forces and chemical bonding, functionality, molecular weight and its distribution, configurations and conformations, morphology, addition and condensation, polymerization, copolymerization. Methods for determining molecular weights of polymers. Polymerization techniques.

Natural organic and inorganic polymers. Degradation of polymers. Properties of polymers. Rheological properties and processing of polymers. Instruments for measuring rheological properties. Newtonian and non-newtonian fluids. Types of flow. Polymer solutions and dispersions. Solid and molten polymers. Application of polymers. Associated laboratory experiments.

CHEM215 Chemistry

Introduction to the principles of chemistry including discussions of atoms, molecules, ions, atomic and molecular weight. Chemical changes, acids and bases and chemical equilibrium. A study of the chemical composition of cements and concrete.

CHEM300 Industrial Chemistry

This course will cover the basic composition, structure and properties of foods, as well as the chemistry of changes occurring during processing and storage.

CHI160 Field Practice

Field Practice is an integral part of the program in affording students supervised clinical experience in a variety of settings. Field experience is considered an essential concomitant to the behavioural sciences.

CHI161 Human Growth and Development

The normal growth of the child is followed from birth to adolescence including physical, emotional and intellectual development. The emphasis is on the first six years of the child's life and his emotional growth during this time.

CHI162 Health First Aid

A lecture-demonstration course focussed on enabling the beginning student to identify and meet the basic physical and safety needs of the children and youth in their care. A standard first aid course is included as well as simple home nursing procedures.

CHI164 Caring for the Disturbed Child

The purpose of this course is to arrive at a treatment philosophy from field placement. Emphasis is placed on areas of basic care and understanding of behaviour of children and staff.

CHI165 Activities with Children

This course will explore a variety of media through play and investigate broad areas of activities that require specific skills of the child. It is the essence of play that the experience is more important than the result. It is through the "doing" that structure actually emerges; the form of any thing is latent in the process.

CHI166 Social Services

Legislation and institutions are studied and related to the child care field. This course includes field trips, guest speakers and class discussions.

CHI167 Student Group Seminar

Each week staff advisors meet with their students to discuss common concerns and explore issues raised by either faculty or students.

CHI172 Group Process

Purpose of the course: To introduce students to the processes of social interaction and methods of observation through research and laboratory experiments and to encourage a more appreciative awareness of individual styles and strengths in group participation.

CHI174 Empathy Training

The course will enhance the student's understanding of self, develop the ability to enter into another person's feelings and to feedback verbally the message that the listener is fully attentive. Students will also develop their potential for communicating messages that are congruent with their feelings.

CHI260 Field Practice

A continuation of CHI160.

CHI261 Psychopathology of Childhood

Discussions include comparison of normal and abnormal development according to the personality theories of Freud, Erikson, descriptions and functioning of defenses and study of specific categories of disturbance (i.e. Autism, Schizophrenia, etc.)

CHI262 Caring for the Disturbed Child

A continuation of Caring I, emphasizing the development of treatment plans for disturbed children on an individual basis.

CHI265 Activities with Children (Water Safety)

A combined theory-practice course to ensure safety and some skill in working with children in and around water.

CHI267 Student Group Seminar

A continuation of CHI167.

CHI268 Treatment Philosophies

An introduction to therapeutic approaches e tant in child psychiatry and the mental hea field today. Major theories underlying t chosen methods of treatment area discusse

CHI270 Group Process II

A focused study of the processes, dynamic structures and politics most relevant to t child care treatment centre in its commun and professional setting. To include topics s supervision, internal structures, relation community, lines of responsibility, etc.

CHI271 Therapeutic Programming

Discussion of the meaning and purpose of p and fantasy and the use of such understandi for more effective communication with childr

CHI272 Working with Families

This course will explore the particular co cerns and problems which arise in working w parents and families. Consideration is a given to teacher-child-child-care worker re tionship.

CHI275 Adolescence

This course has been designed in response to the increasing number of adolescents receiving mental health services. The focus is on the physiological, psychological and sociological aspects in the stages of growth from puberty to adulthood.

CHI276 Adolescent Role & Identity

CIV101 Engineering Drawing and Design

Fundamentals of structural engineering drawing, according to accepted standards and specifications.

CIV103 Construction Materials

Engineering testing and investigation of soils; the manufacture and use of cement and asphalt; the design and control of concrete mix; the design of asphalt mix as applied to highway construction.

CIV104 Specification and Estimating

Method of Measurement and take off for estimates for building and civil works of a relatively simple nature.

CIV106 Land Division

A study of planning legislation in Ontario including official plans, use and zoning, the planning act, and subdivision design.

CIV200 Structural Drawing and Design

Practical introduction to basic design and drawing, as applied to modern structures in reinforced concrete and structural steel.

CIV202 Municipal Services

Collection and distribution of community water supply, factors and manipulations influencing run-off and disposal, pipe sizes, gradients and location of sewer types.

CIV203 Highway Technology

Population and traffic analysis; location, design and construction of roads; legal and engineering requirements; materials and maintenance.

CIV204 Specifications and Estimating

A continuation of CIV104 but dealing with more complex structures together with specification reading and preparation of tenders and analysis of prices.

CIV302 Municipal Services

Zoning by-laws and regulations, planning boards and committees, studies in planning, preparation of planning reports and plans.

CO100 Building Construction

Site selection and excavation, concrete formwork design, construction equipment, power and hand tools, detailing construction elements, plan interpretation, systems and types of construction, field trips.

CO101 Quantity Surveying I

Method of measurement and preparation of estimates for building works for domestic, small office and industrial buildings.

CO102 Mechanical Installations I

Storm and sanitary drainage, plumbing layout. venting and fire protection.

CO103 Construction Materials

The manufacture and use of cement, steel, brick, clay, wood and other building products; the control and application of quality concrete under laboratory conditions.

CO104 Site Engineering

A basic course in the fundamentals of plane surveying, utilizing the various survey instruments and equipment.

CO105 Principles of Concrete

A detailed study of cement and its properties, concrete mix design, quality control, testing procedures and compilation of results.

CO106 Concrete Construction Methods

An introduction to concrete components used in all construction; the mixing, transporting, placing, finishing and curing of concrete.

CO107 Blueprint Reading & Drafting

Fundamentals of drafting, interpretation of concrete structural drawings.

CO108 Quantity Surveying

CO110 Building Construction

Principles of building construction in terms of the assembly of materials; examination of typical systems of wood and masonry construction. Study of architectural detailing. Design, construction equipment, power and hand tools, site fabrication — pre-fabrication, field trips.

CO111 Materials of Construction

The manufacture and use of cement, steel, brick, wood and other building products used in home construction. The control and application of quality concrete under lab conditions. Theory of selection and location of materials in the building fabric, especially walls, roof, interior finishing, detailing. Testing and investigation of soils.

CO112 Contracts Specifications & Codes

Contracts, contract law, standard forms, study of codes based on national building codes and Ontario building codes and others. Specification of materials and methods of construction. Site selection, excavation, concrete formwork design, construction equipment, power and hand tools. Site fabrication — pre-fabrication, field trips.

CO200 Building Construction

Reinforced concrete, structural steel, lam- nated timber and masonry construction, an equipment; construction organizatio architect, engineer and trades. Drawing and terpretation; field trips.

CO201 Quantity Surveying II

Advanced method of measurement and pr paration of estimates for building works inclu ing preparation of estimate and price build-u

CO202 Mechanical Installations II

A study of those elements of environmen controls, such as heating, air conditioni electrical and plumbing design and layout wi in the modern building.

CO203 Contracts & Specifications

Contracts, contract law, standard form methods and applications of various schedu ing systems.

CO204 Site Engineering

The use and application of survey instrumen setting out buildings, offsets, curves, grad and earthworks.

CO205 Principles of Concrete

Continuation of CO105, further detailed stu of cement and its properties.

CO206 Concrete Construction Methods

Regulations and building code, construct and inspection methods, basic study in lig weight concrete, specialized concrete build components.

CO207 Concrete Structural Design

Theory and design of reinforced concrete structures and sturctural elements.

CO208 Mechanical and Electrical Installations

A study of those mechanical and electrical devices and installations affecting the total design of a structure, such as elevators, escalators, conveyors; fire protection, plumbing heating, air conditioning and electrical layouts.

CO209 Contracts and Specifications

CO210 Contracts and Specifications

Contracts, contract law, standard forms, methods and application of various scheduling systems.

CO211 Construction Project Scheduling

Pre-tender planning, basic network. C.P.M. Pert. Bar Charts, etc.

CO212 Building Construction

Principles of construction as applied to re-concrete. Structural steel, laminated timber and masonry construction and equipment, construction organization, the architect, engineer and other trades field trips.

CO213 Mechanical-Electrical Services-Electrical

CO214 Mechanical-Electrical Services-Plumbing

CO215 Mechanical-Electrical Services-Heating

CO216 Site Engineering

COAT203 Thermoset Resins

Raw materials, manufacturing, chemistry, curing and properties of thermoset polymers and co-polymers used in coatings; polyesters, alkyds, epoxies, phenolics, silicones, amino resins, urethanes, furanes.

COMM101 Communications

The focus is on identification of the elements which are essential for effective communication, techniques of communication, the differentiation between a social and therapeutic relationship, recognition of factors which influence communication, and the utilization of concepts of communication in group interaction. (45 hours)

CUL200 Culinary Management Projects

The practical application of culinary management techniques to real problems through case studies, seminars, workshops, research reports and field assignments.

CW100 Field Work

Field work is the core of the program and will be concurrent and integrated with course work in both years. A catalytic approach is implied enlisting citizen participation and encouraging citizen leadership to mobilize identifiable resources around issues of concern to communities.

CW101 Field Work Seminar

Students will meet in small groups with their staff advisor to share common difficulties arising in field work. The participation of all students involved in field work will be required.

CW102 Community Services and Resources

This course is to acquaint students with systems of existing services and to analyze methods of modification for enabling agencies to become more relevant to community needs.

CW104 Community Practices and Methods

Students will learn a variety of necessary skills to be useful community workers and be more employable, for example: layout, printing, photography, video, films, gestetner, office procedures, writing briefs, action research, letter writing, charing meeting, parliamentary procedure, etc.

CW105 Group Process I

Group Process I will focus, through participation, on the dynamics of small groups, using the student group itself as a learning laboratory.

CW106 Community Development

Students will focus on examining frameworks for community development (theory and practice) models, strategies, resources, influencing decision making processes, and systems modification. Examples will be studied.

CW107 Human Growth and Development

The critical stages of personal growth will be related to the socio-economic, political and ecological variables which influence the life-long development, potential and actions of the individual within the larger society.

CW200 Field Work

A continuation of CW100.

CW201 Field Work Seminar

A continuation of CW101.

CW202 Business and Administration

This course provides basic techniques managing and supervising centres or organ tions. Elementary bookkeeping, personnel p cedures, fund raising, the conduct of busin meetings and the organization of staff will p vide core subject areas.

CW203 Canadian Society and Social Change

This course will explore changing trends Canadian Society as shown through histo precedence and socio-economic developm Focus will be on analysis of media, governm tal reports, novels, essays etc., that dem strate influences on Canadian Society which are of current interest to students advocates of community improvement.

CW204 Communications and Understanding Media

This course will focus primarily on a continu review and analysis of the various media a consideration of how to use the media for co munity work purposes.

CW205 Group Process II

Group Process II will encompass goal set and organizational development. The ove concept of this course is to demonstrate gro development from an analysis and demo stration of the dynamics and potential of small group, through an exploration of tech ques (role-playing, creative problem-solvi and theories of group, to a study of formal groups (families, organizations, etc.) and h they set goals and carry out activities.

CW206 Independent Study Seminar

Students will pursue a topic of particular terest or relevance with the assistance staff member.

CW207 Political Science

This course is designed to give the student an understanding of municipal, provincial and federal politics and explores their interrelationships. Methods of social action that have an impact on the political process will be studied.

CW208 Analysis of Health Services

Familiarization with and analysis of various current treatment philosophies and methodologies relevant to community work needs and philosophy.

CW209 Basic Support & Intervention Skills

Theory and practice of interviewing and counselling; functions of the interview; fundamentals of successful interviewing; communication facilitating methods and barriers to effective communication; assessment and recording; survey methodology and research technique.

DCW100 Infant and Child Development

A look at development from birth to 2 years from the perspective of (1) Heredity and environment; (2) Growth and maturation; (3) Learning, motivation and emotion; (4) Language, and (5) Intelligence. A discussion of relevant infant care routines and programs and the adult's role in those programs.

DCW101 Health & Well Being

To increase the awareness of healthful concepts specifically for working with infants and children in a daycare centre. A standard first aid course is given by the Canadian Red Cross.

DCW103 Mental Health

A seminar on the infant's personality development and the impact of the infant-adult relationship on the growth and development of the child.

DCW104 Principles of Day Care

Current ideas and existing day care programs are examined and discussed to determine the way they meet the developmental needs of infants and children.

DCW105 Creative Expression in Childhood

This course will explore the creative process: what activates it; how it functions; how its universal aspects have implications in the modes of learning and self-expression of the growing child. Accordingly, the course will investigate play and a variety of media, through seminars and workshops.

DCW107 Community Services

This course introduces students to the range of agencies concerned with the health and welfare of the child and the family.

DCW108 Group Process

A study of group dynamics with opportunities to develop skills in leading groups or affecting group processes.

DCW110 Special Studies-Communication

A reading seminar in English literature supported by background philosophy on man's research for identity in the 20th century.

DCW111 Field Work Seminar

The class is made up of small groups headed by a staff advisor, who is also the co-ordinator between the college and field placement. To discuss the courses in relationship to field placement.

DCW112 Field Practice

Individual student supervision and evaluation is given in selected day care settings to provide

an opportunity for the student to observe and to practice with infants and children in day care as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW113 Field Practice

Individual student supervision and evaluation is given in selected day care settings to provide an opportunity for the student to observe and to practice with infants and children in day care as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW114

DCW200 Human Growth and Development

A study of the process in which an infant grows and develops into a mature human being — the nature of the relationship between the child and society — the stages of development to maturity from a variety of theoretical and practical viewpoints.

DCW201 Children With Special Needs

An examination of etiology and treatment concepts related to children with special needs: physical, psychological and sociological.

DCW202 Cognitive Development

Aim: to develop a theoretical framework for examining how learning occurs. The student will be required to research and generate a program within an area of individual interest such as science, drama, etc.

DCW203 Planning Management and Legislation

A study of the resources and skills needed in setting up and managing a day care centre, starting with legal requirements, initial stages of planning and developing programs and progressing to final stages of financing, accounting, and managing a day care operation.

DCW204 Varieties of Day Care

A survey of various day care programs reflecting different philosophies in day care accompanied by field trips where possible.

DCW205 Creative Expression in Childhood

A study of the resources and skills needed in setting up and managing a day care centre, starting with legal requirements, initial stages of planning and developing programs and progressing to final stages of financing, accounting, and managing a day care operation.

DCW206 Family Dynamics

A study of the various interactions in family and the facts and issues which influence them and a practical application of this knowledge to actual day care family situations.

DCW207 Parent Interviewing and Counselling

A survey of parent education theories with opportunities to practice techniques of interviewing, counselling, group education and community organization.

DCW208 Professional Development

This course will include concepts of professional behavior and responsibilities to children, parents, colleagues and members of allied professions as well as the importance of responsibilities for self growth within the day care field.

DCW210 Field Work Seminar

The class is made up of small groups headed by a staff advisor, who is also the co-ordinator between the college and the field placement. We discuss the courses in relationship to the field placement.

DCW211 Field Placement

Individual student supervision and evaluation is given in selected day care settings to provide an opportunity for the student to observe and to practice with infants and children in day care, as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW212 Field Placement

Individual student supervision and evaluation are given in selected day care settings, to provide an opportunity for the student to observe and to practice with infants and children in day care, as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW213 Field Placement

Individual student supervision and evaluation are given in selected day care settings, to provide an opportunity for the student to observe and to practice with infants and children in day care, as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DENT101 Dental (Manipulation) Technology

During this series of laboratory sessions, the student will be given the opportunity to manipulate the various materials used in dentistry. Subjects covered will include gypsum, alloys, porcelain, resins, impression materials, gold and metal alloys, denture base and tray materials, and dental polishes and abrasives. (34 Hrs.)

DENT104 Preventitive Dentistry-A

This course serves as an introduction to the practice of preventive dentistry. Some basic concepts are presented but the emphasis of the program is on the practical approach to the problem. Methodology and patient counselling techniques are emphasized. (15 Hrs.)

DENT106 Dental Materials

A series of lectures and laboratory exercises presented to first year students on the subjects of dental materials. The purpose of the lectures is to introduce the student to a wide variety of materials to which he or she will be exposed, during routine activities in the dental office.

The laboratory exercises provide practical experience in the technical area required of the dental assistant. (79 Hrs.)

DENT109 Radiology

This course consists of a series of lectures on the physics and application of radiography in dentistry. The student will spend a considerable period of time applying these principles, both through seminar-demonstration and clinical experience. (79 Hrs.)

DENT115 Orientation to Dentistry

This short program is undertaken at the beginning of the semester. It is intended to introduce the student to the art and science of dentistry as a body of knowlege, and through this introduction to orientate the student to his or her role on the dental team. This period is also used to familiarize the student to nomenclature, clinical decorum, personal hygiene and routine office maintenance. (30 Hrs.)

DENT116 Oral Examination

In preparation for clinical practice, this course is intended to teach the student to identify normal and abnormal conditions in the oral cavity. A knowledge of treatment patterns and their consequences will form a major component of the program. (32 Hrs.)

DENT204 Preventive Dentistry-B

This course builds on the practical knowledge acquired in the First year. The course consists of laboratory exercises, lectures and demonstrations which elucidate the etiology of caries and periodontal disease, together with the current methods available for the control of these diseases. The concepts of plaque, fluorides, and other anti-carcinogenic agents will be dis-

cussed. Practical experience in preventive counselling techniques enables the student to fulfill his or her role in preventive dentistry. (30 Hrs.)

DENT205 Preventive Dentistry

A comprehensive course covering the important concepts and techniques in the practice of preventive dentistry.

Topics included are dental plaque, dental caries, periodontal disease, fluorides, pit and fissure sealants, preventive home care procedures, patient education and preventive programs in private practice.

DENT206 Dental Health Education

This course will offer students practical approaches to classroom, small group, and individual teaching practices which will enable them to effectively carry out their responsibilities as dental health educators, practical teaching experience is included as part of the curriculum. (45 Hrs.)

DENT209 Advanced Radiography

This short program is devoted to a theoretical study of the principles of the extra oral radiographic techniques used in dentistry. Demonstrations in techniques will be held. (10 Hrs.)

DENT217 Community Dentistry

This program discusses the role of dentistry in the overall health of the community. Topics include the utilization of dental services and auxiliaries in both the public and private sectors, preventive measures and prepayment mechanisms. (15 Hrs.)

DENT316 Community Dentistry, Ethics & Jurisprudence

This program is designed to provide an overview of the various factors which influence the provisions of dental services to the community. Need, demand and supply of services will be analyzed. The role of auxiliaries in effecting change in dental delivery patterns will be stressed.

The lectures in ethics present the meaning of the dental profession, the interrelationship of auxiliary personnel to their peers and the ethical relationship and responsibility of the dental profession to the public.

The course on jurisprudence includes discussion on the source of the law in Ontario, the court system and legal terminology. The Dentistry Act, The Denture Therapists Act, the Health Disciplines Act and other appropriate legislation are explained. (15 Hrs.)

DES169 Design I

Theories of line, layout, design, lettering (styles), transferring designs to metal, etc. (48 Hrs.)

DES169D Jewellery Design (Refresher)

Review of principles of good design, sketching, drawing and further study of features of well designed jewellery.

DES179 Design for Jewellery Arts

Continuation of DES 169. Sketching, rough ideas, finalizing and shading to achieve depth and realism.

DES269 Design

Sketching and rendering fancy shaped stones and modern jewellery.

DES279 Design Simplified

Ring sketching for quick counter demonstration. Promoting special order work.

DES300 Design-A-Line

Refining the pattern drafting and design skills by designing and producing a small line of garments (6-12) as in industry. Evaluation by a committee from industry. (336 Hrs.)

DES351 Design-A-Line

As DES 300 but in styles for a season other than selected for DES 300. (400 Hrs.)

DES369 Jewellery Design

Sketching and layouts rendering of projections in black and white and colour.

DES379 Jewellery Design

Painting and rendering platinum and gold jewellery, analysing a design to ensure practicality.

DES469 Design

Post graduate — redesign old pieces, style. (48 Hrs.)

DES479 Design

Post graduate — sophisticated styling, renovating old jewellery, designs for repairs. (48 Hrs.)

DIC200 Medical Dictaphone

Initially transcription will be from professionally dictated tapes, belts and discs, including material such as operative notes, final summaries, case histories, etc., covering areas such as neurology, internal medicine, orthopedics, etc. In the last semester, emphasis is on intensive production of actual hospital dictation in addition to on-the-job training in a downtown hospital.

DIC201 Medical Typing and Dicta

Initially transcription will be from professionally dictated tapes, belts and discs, including material such as operative notes, final summaries, case histories, etc., covering areas such as neurology, internal medicine, orthopedics, etc. In the last semester, emphasis is on intensive production of actual hospital dictation in addition to on-the-job training in a downtown hospital. The operation of memory typewriters is also covered.

DIC202 Medical Typing Dicta and Word Processing

In this course the student has the opportunity to handle medical terms on the typewriter, as well as using the transcribing equipment. Familiarization with the operation of memory typewriters is also included.

DIC203 Medical Dictaphone and Word Processing

An advanced version of DIC 200.

DIC205 Dictaphone

This is a short course to familiarize the secretarial student with the use of transcribing equipment. The student is exposed to the regular transcribing equipment as well as to the more sophisticated equipment such as continuous loop system, thought tanks, etc.

DRES141 Apparel Construction (Dressmaking) I

Projects: shifts of jumpers, skirts (wool), and/or blouses (cotton). Measurements, relationship of pattern, style and fabric, laying out patterns, sewing techniques (hand and domestic machine). (64 Hrs.)

DRES145 Apparel Construction (Dressmaking) II

Prerequisite: DRES 141 or equivalent.

Continuation of DRES 141 — the proper selection of style and pattern to suit the wearer and material; fashions and their changes; knits and stretch fabrics techniques; intimate wear and lingerie; special finishes. Student to supply materials. (30 Hrs.)

DRES145A Apparel Construction (Dressmaking) Intermediate

DRES146 Tailoring I — Basic

Prerequisite: DRES 141 or sewing skills.

Ladies tailoring, sewing, cutting techniques, finishing coats and suits using commercial techniques, some men's and children's tailoring. Students supply own materials.

DRES151 Dressmaking — Advanced

Construction layout, cutting, finishes, making samples. Projects: detailed dresses, skirts and weskits (lined) and gowns. Emphasis on fitting, hand finishes and detail. Application of trims, bound buttonholes, pockets, zippers, etc. (96 Hrs.)

DRES156 Tailoring — Intermediate

Projects: wool coat or cape; suit jacket and skirt; etc. (30 Hrs.)

DRES221 Couture Construction

Special techniques for hand sewing and finishing garments.

DRES222 Alterations and Fitting

Alterations and fitting garments for custom clients.

DRES241 Couture Construction

Most efficient ways of cutting and seaming garments and assembling parts to form clothing. Efficient use of fabric to minimize waste. (96 Hrs.)

DRES241A Couture Construction

Make dress from stock pattern; make own dress design into garment; samples from factory cotton.

DRES242 Fabrics III

Project: fabric book (samples and examples best use) — co-ordinate colors and textures knits, trims, braids, etc. (48 Hrs.)

DRES244 Alterations, Fitting — Advanced

Pattern changes before construction to eli nate fitting problems. (96 Hrs.)

DRES246 Tailoring III — Men's

Special finishes: buttons, belts, etc. Men's a parel. (48 Hrs.)

DRES247 Dressmaking Construction III — Advanced

Sample-making for the professional appe plant. (48 Hrs.)

DRES248 Apparel Plant Supplies

Trims, zippers, supplies, etc., and the optim methods of efficient purchasing and stock of them. (64 Hrs.)

DRES249 Store Workroom Problems

Case studies of workroom problems. (64 Hr

DRES251 Couture Construction

Engineering shortcuts to accomplish m work in less time. (96 Hrs.)

DRES252 Fabrics — Knits — Trims — Braids

Selection and buying; analyse ready-m garment; description; labelling laws.

DRES254 Alterations, Fitting (Advanced)

Pattern changes before construction to elimi sible fitting problems. (96 Hrs.)

DRES255 Tailoring

Tailoring men's and ladies' garments — con struction.

DRES256 Tailoring IV

Commercial approach to finishing and substitutes for hand operations. (32 Hrs.)

DRES257 Couture Construction

Hand sewing and finishing techniques for fur Design students.

DTC200 Denture Therapy — Clinical

In semesters 3, 4 and 5, the denture therapy student concentrates upon the art and science of providing denture prostheses for the public. Initially, the student will practise on mannequins and will be phased into patient care through the conduct of the course. Clinical decorum and patient-therapist relationships are strongly emphasized. (384 Hrs.)

DTC300 Denture Therapy — Clinical

In semesters 3, 4 and 5, the denture therapy student concentrates upon the art and science of providing denture prostheses for the public. Initially, the student will practise on mannequins and will be phased into patient care through the conduct of the course. Clinical decorum and patient-therapist relationships are strongly emphasized. (240 Hrs.)

DTFW300 Denture Therapy — Field Work

In the fifth semester, denture therapy students will have the opportunity to visit various practitioners and observe the practical aspects of practice. The offices will be carefully selected and the experience will be problem-oriented. (80 Hrs.)

EC100 Economics

This course is concerned with the nature and scope of economics. Private and public ownership is discussed, as well as capitalism, socialism and communism, theory of price, supply and demand, wages, rents, interest and profits, consumer credit and borrowing, personal finances, social services, methods, advertising. (64 Hrs.)

EC101 Economics

This course is concerned with the nature and scope of economics, private and public ownership is discussed, as well as capitalism, socialism and communism, theory of price, supply and demand, wages, rents, interest and profit.

EC104 Economics

EC105 Economics

Understanding of the economic factors that influence the personal and business affairs of Canadians, basic economic structure of our society, supply and demand, business organization, money and banking, international trade, business cycles, public finance and taxation, consumer credit and borrowing, personal finances, social services.

EC111 Economics

EC113 Business Organization — Records

Maintenance of records, charts, files, cost accounting, receivable and payable, inventory, stock, supplies, materials, receipts, budget, expansion and growth.

EC175 Managerial Economics I

Financial and banking — sec. 88 of The Bank Act — capital, etc.

EC210 Economics I

Basic Economics and industrial organizations: forms of economic organization and business financing.

EC211 Economics II

Supply and demand business cycles and compensatory countercyclical fiscal policy, labour economics, insurance, civics organization of federal, provincial and municipal governments.

EC212 Business Organization

Administrative and office services, auto data processing, short, medium and long term financing and functions and methods of marketing, sales and sales promotion activities.

EC214 Business Management Labor Relations

A study of selected principles of and problems in industrial relations with emphasis on supervision, the essentials of successful management, organization, inventory control, regulations and other phases of small business operation.

EC231 Managerial Economics

Inventories, control, materials flow, financing.

EC241 Managerial Economics III

Statistics and quality control — apparel.

EC242 Managerial Economics II

Economics of the apparel industry.

ED100 Fundamentals of Supervision

An introduction to the role of the supervisor in industry. Topics include the responsibilities of the supervisor, leadership, effective communications, and employee morale. Using a number of case studies students will be actively involved in applying the concepts discussed to actual work situations.

ED101 Teaching Techniques

The development and application of a variety of effective techniques useful in instructing individuals and groups. Topics include subject analysis, objectives, lesson planning, motivation and audio-visual aids. Each student will be required to present several practice sessions followed by a constructive critique of the lesson.

EDP100 Introduction to Data Processing

This course provides an overview of business data processing which will prepare the participant for further study in the areas of programming and systems analysis. Topics include hardware and software features, programming languages, flowcharts, and programming experience.

EDP101 Cobol I

Language mechanics of cobol are introduced and students gain practical experience by writing programs to solve business type problems. Emphasis is placed on documentation of programs.

EDP102 IBM/370 Assembler I

This course introduces IBM/370 architecture and discusses in detail the components of the IBM/370 series of computers. Topics include hardware and software features while emphasizing programming in assembler language.

EDP103 Programming I

Prerequisite: EDP 100 or equivalent.

The objective of this course is to provide a thorough knowledge of the programming techniques used to solve business applications. Topics include accounting marketing and physical distribution problems and the participant is encouraged to use the computer as a powerful tool for management.

EDP104 Management Information Systems (MIS)

This introductory course in MIS examines the role of the systems analyst within an organization. Case studies and class problems encourage participants to develop skills and to utilize techniques associated with the systems function.

EDP105 Elementary Computer Concepts

The function of the computer, its use and limitations, basic computer systems, tele-processing, hardware, software, time sharing, basic programming, problem solving.

EDP181 Computer as a Management Tool I

Business math-orientation to computers, flowcharts.

EDP182 Computer as a Management Tool II

Elementary programming. (48 Hrs.)

EDP191 Computer as a Management Tool III

Production control with use of EDP equipment in apparel industry.

EDP200 Cobol II

Applications such as accounts receivable and payroll are the subject of programming assignments. Techniques include sorting, summarizing and master file update.

EDP202 Management Information Systems

Prerequisite: EDP 900 or equivalent.

This introductory course in systems analysis is designed to acquaint students with the important role of the computer in business. A number of business computer applications are used to illustrate the effectiveness of the computer as a tool for management. Students gain an insight into the criteria applied by managers in deciding how the computer should be used.

EDP204 Advanced Programming

Prerequisite: approval by the instructor.

Applications requiring several interactive programs and involving the use of direct access storage are designed by the class. Individually, students write the necessary programs to install and maintain the applications. COBOL is the primary language, however, techniques for insertion of segments in other languages are introduced.

EDP205 IBM/370 Assembler II

Prerequisite: a "C" standing in Assembler I or equivalent. This advanced course in programming the IBM/370 series of computers focuses on many of the powerful features of assembler language. Case studies and comprehensive problems encourage programming proficiency while extending the programmer's knowledge of applications.

EDP206 Systems Analysis and Design

Prerequisite: a "C" standing in Systems Analysis I or equivalent. This advanced course on systems analysis involves active participation in problem investigation and encourages analytical examination of facts prior to the presentation of a proposed solution.

EDP208 Advanced E.D.P. Topics

This advanced course focuses on the current state of EDP technology. Trade periodicals are the primary reference source.

EDP209 Computer Hardware & Systems

This course examines the development of computer hardware systems and explores the trends in the design of future computer systems. Topics include computer organization, data representation, input/output media, data entry, distributed processing, teleprocessing and mini-computers.

EDP210 Systems Analysis & Design

This advanced course involves active participation in problem investigation and encourages analytical examination of facts prior to the presentation of a proposed solution.

EDP211 Computer Software & Systems

This course examines the development of computer software and explores the trends in the design of future computer software. Topics include operating systems, multi-programming, virtual storage, JCL (job control language), and comparative programming languages such as PL/1, BASIC, FORTRAN or APL.

EDP253 Computer as a Management Tool IV

Practical uses of computers in industry — EDP systems design for apparel.

EDP360 Advanced Computer Uses

In the apparel industries on line, etc., simulation, digitizer, operations research. (64 Hrs.)

EL106 Electrical and Electronic Fundamentals

Ohm's Law, D.C. circuits, power dissipation, magnetism and electromagnetism, inductance, capacitance, alternating currents, inductive and capacitive reactance, impedance, A.C. circuits, power dissipation and A.C. circuits.

EL115 Applied Circuit Analysis I

A tutorial in solving simple passive D.C. a... A.C. circuits using the slide rule, and us... basic algebraic and trignometric manipulation... in their solution. An introduction to time co... stants, and to circuits requiring solutions b... quadratic equations.

EL121A Direct Current Machines

See description for EL 121T.

EL121T Direct Current Machines

Construction and operation of separately-e... cited, shunt, series, and compound generator... armature windings; equalizer winding; com... mutation; three-wire generators; dynamotor... series boosters; amplidynes; rototrols; regul... generators; Ward-Leonard system; constru... tion and operation of shunt, series, and co... pound motors; braking; maintenance of D.C... machines.

EL123T Electrical Drafting IIB

Three-phase motor control circuits; induction... motor control and schematic, part-winding... motor control and schematic; synchronous... motor control schematic; reduced voltag... starting circuits; forward-reverse contro... point-to-point and highway type wiring... diagrams; conversion from wiring diagram... schematic diagram; D. C. motor contro... schematics.

EL125T Electrical Laboratory IIB

Elements of the shunt generator, voltage... characteristics of a shunt generator, shunt and... separately excited generators, components o... a voltage drop in a shunt generator, rotationa... losses in a D.C. machine, separation of rota... tional losses (D.C. generator), efficiency and... losses of a shunt generator, the compound... generator, efficiency and losses of a compound... generator, shunt generators in parallel, com... pound generators in parallel, direct current... booster, direct current shunt motor starting... rheostat, operation of a direct current shunt... motor, static torque of a D.C. motor, efficiency... and losses of a shunt motor, the direct current... series motor, the compound motor, the Kapp... opposition test, motor generator set.

EL126A Control of D.C. Apparatus Laboratory

Relays and contractors, schematic diagrams and circuit layouts, across the line starting, series starting resistance controllers, manual and automatic. Counter E.M.F. starter time limit starter. Volt drop acceleration control, series relay acceleration, time relay methods, jogging control, dynamic and regenerative braking, plugging motor drives.

EL126B Control of A.C. Apparatus Laboratory

A.C. relays and contactors, schematic diagrams and circuit layouts, types of overload devices; A.C. motor starters, synchronous motor starters, induction motor starters, reduced voltage starters, line resistance method, autotransformer or compensation method, Wyedelta method; part winding starter, speed control, electric braking.

Elements of the shunt generator, voltage characteristics of a shunt generator, shunt and separately excited generators, components of voltage drop in a shunt generator, rotational losses in a D.C. machine, separation of rotational losses (D.C. generator), efficiency and losses of a shunt generator, the compound generator, efficiency and losses of a compound generator, shunt generators in parallel, compound generators in parallel, direct current booster, direct current shunt motor starting rheostat, operation of a direct current shunt motor, static torque of a D.C. motor, efficiency and losses of a shunt motor, the direct current series motor, the compound motor, the Kapp opposition test, motor generator set.

EL130 Electrical Fundamentals

Electrical and electron theory, laws and applications, symbols and schematics, circuits, wiring practices, motors, transformers, test equipment and analysis, vacuum tubes and transistors.

EL134T Electrical Laboratory

Review of A.C. fundamentals; review of balanced three-phase systems; unbalanced three-phase four-wire wye-connected loads; unbalanced delta-connected loads; unbalanced three-wire wye connected loads; combination unbalanced loads; phasor diagrams; two-watt meter method of measuring power; meter switching circuits; electrical systems; overhead and underground distribution systems; types of distribution systems; system regulation; voltage regulators; lightning arresters; circuit breakers; street lighting system.

EL200 Electric Fundamentals

Ohm's Law, D.C. circuits, power dissipation, magnetism, electromagnetism, A.C. circuits, A.C. power dissipation, inductance, capacitance, impedance, D.C. and A.C. machines, transformers, relays and switching, welding machine trouble-shooting and repair.

EL231T Electrical Control Systems

Direct current relays and contactors, direct current motor control circuits, alternating current relays and contactors, alternating current motor control circuits, logic motor control circuits.

EL232T Alternating Current Machines

Transformer principles; construction of single-phase and three-phase transformers; standard transformer tests; impedance and voltage regulations; parallel operation; transformer connections; construction of alternators; stator windings; rotor windings; impedance; voltage regulations; alternator test and regulation calculations; armature reaction; parallelling; operation of synchronous motors; phasor diagrams; power-factor control; super-synchronous motors; synchronous induction motor; construction of three-phase induction motors; operation of induction motors; starting torque and current; breakdown torque; construction and operation of single-phase induction motors; split-phase starting; shadedpole motors; repulsion motors; single-phase synchronous motors; maintenance of A.C. apparatus.

EL234 Electrical Distribution Systems

Review of A.C. fundamentals; review of balanced three-phase systems; unbalanced three-phase four-wire wye-connected loads; unbalanced delta-connected loads; unbalanced three-wire wye-connected loads; combination unbalanced loads; phasor diagrams; two-watt meter method of measuring power; meter switching circuits; electrical systems; overhead and underground distribution systems; types of distribution systems; system regulation; voltage regulators; lightning arresters; circuit breakers; street lighting system.

EL234T Electrical Laboratory IIIB

Review of A.C. fundamentals; review of balanced three-phase systems; unbalanced three-phase four-wire wye-connected loads; unbalanced delta-connected loads; unbalanced three-wire wye-connected loads; combination unbalanced loads; phasor diagrams; two-watt meter method of measuring power; meter switching circuits; electrical systems; overhead and underground distribution systems; types of distribution systems; system regulation; voltage regulators; lightning arresters; circuit breakers; street lighting system.

EL235 Industrial Electronics

Review of the operation of vacuum tubes and semiconductor diodes and transistors; Zener, Avalanche, and Esaki diodes; field-effect transistors and unijunction transistors; four-layer diodes; photoelectric devices; saturable reactors and magnetic amplifiers; gas diodes, ignitrons, and thryatrons; logic devices.

EL235T Circuit Analysis by Computer

Review of the operation of vacuum tubes and semiconductor diodes and transistors; Zener, Avalanche, and Esaki diodes; field-effect transistors and unijunction transistors; four-layer diodes; photoelectric devices; saturable reactors and magnetic amplifiers; gas diodes, ignitrons, and thryatrons; logic devices.

EL238 Electrical Laboratory

Alternator operation with resistive loads, alte
nator regulation, alternator regulation (syn
chronous impedance method), alternato
voltage control, alternator efficiency by loadin
alternator efficiency by loss measuremen
alternators connected to a power syste
parallel operation of alternators, operation o
synchronous motors, torque-angle charac
teristics of synchronous motors, V curves an
power-factor curves for synchronous motors
power factor improvement with synchronous
motors, synchronous-motor efficiency, opera
tion of wound-rotor induction motors, operation
of squirrel-cage induction motors, transforme
ratio, polarity (A.C. method), polarity (D.C
method), open circuit or core loss test, sho
circuit test, operation under load, auto
transformer operation.

EL240 Installation and Branch Circuits

Layout of branch circuit wiring for split-phas
and three-phase distribution systems, includ
ing size and number of conductors and size o
conduits for commercial and industrial systems
calculation of loads for lighting and powe
panels, also feeders; special calculations fo
conductor sizes and fuse or breaker protection
for motor loads; use of H.E.P.C. safety code and
tables; use of copper and aluminum conduc
tors.

EL241 Industrial Electronic Control Systems

Timing circuits; electronic timers; photo
electric relays; light-sensing relays; tem
perature-sensing relays and temperatur
recorders; voltage regulators; voltage-sensing
relays; motor-speed controllers; position con
trollers; power rectifiers; resistance welders
electronic heaters; electronic instruments
logic devices; synchros, static stability of ser
vomechanisms.

EL241T Electrical Distribution Systems

Review of alternating current fundamentals
three phase supply systems, phase and lin
values, power, power factor improvement, bal
anced and unbalanced systems, types o
generating stations and associated equipmen

transformer stations, transmission lines, switching stations, types of distribution systems, overhead and underground systems, distribution system regulation, operating characteristics of transformer banks, equivalent circuits and systems analysis.

EL242 Electrical Apparatus

Transformer principles; construction of single-phase and three-phase transformers; standard transformer tests; impedance and voltage regulation; parallel operation; transformer connections; construction of alternators; stator windings; rotor windings; impedance; voltage regulation; alternator test and regulation calculations; armature reaction; parallelling; operation of synchronous motors; phasor diagrams; power-factor control; super-synchronous motors; synchronous induction motor; construction of three-phase induction motors; operation of induction motors; starting torque and current; breakdown torque; construction and operation of single-phase induction motors; split-phase starting; shaded-pole motors; repulsion motor; single-phase synchronous motors; maintenance of A.C. apparatus.

EL242T Industrial Electronic Fundamentals

See description for EL 235.

EL243T Protection of Electrical Equipment

Transformer substation design; grounding arrangement, electrical arrangement, single-and three-line diagram and preparation of a complete bill of material for the substation; relay and control panel layouts and wiring diagrams.

EL244 Wiring Methods and Code

Wiring materials including conduit non-metallic sheet cable, armoured cable, mineral insulated cables, aluminum sheet cables, bussways, wireways, services, residential, commercial, and industrial; devices; fixtures; motors; electrical safety code applications.

EL246 Electrical Laboratory

Laboratory to coincide with topics in EL 241.

EL246T Electrical Laboratory

Alternator operation with resistive loads, alternator regulation, alternator regulation (synchronous impedance method), alternator regulation (A.I.E.E. method), alternator regulation (American Standards method), alternator regulation (two-reaction method), alternator voltage control, alternator efficiency by loading, alternator efficiency by loss measurement, alternators connected to a power system, parallel operation of alternators, operation of synchronous motors, torque-angle characteristics of synchronous motors, V curves and power-factor curves for synchronous motors, power factor improvement with synchronous motors, synchronous-motor efficiency, operation of wound-rotor induction motors, rotary frequency changers, operation of squirrel-cage induction motors, the circle diagram of an induction motor, induction generators, operation of three-phase induction motors on single phase, induction-motor phase converters.

EL247 Electrical Design Applications

Layout of switchboards; distribution systems, low voltage signal systems and electrical heating systems, calculations for lighting layouts and heat loss factors, meters, mechanical design of related electrical equipment and transmission towers, electronic chassis layouts and printed circuits. Complete design drawings for electrical installations for residential, commercial and industrial projects.

EL249 Electrical Specification Writing

Basic concepts of specification writing. Legal use and interpretation of English. Reading working drawings. Legal position of contractor, engineer, architect and client. The legal importance of electrical drawings and relationship to the specification. The importance of electrical codes and approvals. Details of the sections of an electrical specification. Practice in writing a short electrical specification using a completed set of electrical, architectural and mechanical drawings. Specification office procedure.

EL250 Electrical Environmental Systems

Basic concepts of electrical heating as applied to the environment and calculations for electric power loads. Principles of illumination and calculations related to electrical power loads.

EL305 Machine Circuits and Apparatus

Basic fundamentals of D.C. and A.C. circuits, electromechanical control of A.C. and D.C. motors, trouble shooting electromechanical systems with instruments. Thorough understanding of pertinent wiring and schematic diagrams.

EL351 Industrial Electronic Control Systems

Timing circuits; electronic timers; photoelectric relays; light-sensing relays; temperature-sensing relays and temperature recorders; voltage regulators; voltage-sensing relays; motor-speed controllers; position controllers; power rectifiers; resistance welders; electronic heaters; electronic instruments; logic devices; synchros, static stability of servomechanisms.

EL352 Electrical Environmental Systems

Basic concepts of electrical heating and air conditioning as applied to the environment and calculations for electrical power loads. Principles of illumination and calculations related to electrical power loads; acoustics and methods of controlling sound in the environment and calculations of electric power loads.

EL354 Electrical Laboratory

Laboratory to coincide with topics in EL351.

EL362 Electronic Instruments

Instrument errors; statistical analysis of results; standards of measurments; DC indicating instruments; loading effects; potentiometers; DC bridges; AC bridges; oscilloscopes; applications of oscilloscopes; electronic analog instruments; digital instruments; sig generators; waveform analyzers; time and quency measurement; transducers.

EL363 Closed Loop Controls

Feedback principles, notation and definitio transform theory; feedback diagrams, nyqu stability, bode, etc.; servos, syncros, se amp., Ward Leonard system; application, tra ducers, photoelectric controls, induction h dielectric heating, motor controls, chem controls.

EL364 Electrical Machine Design

General design procedure; design of sin phase and three-phase transformers; desig polyphase induction motors; design of s chronous machines; design of single-ph motor; design of dc machines.

EL365 Electrical Estimating

Analysis of electrical drawings, take off p cedures, pricing, labour cost, adjustments working conditions and non-productive cos incidental and direct job costs including ele trical heating, analysis of specifications.

EL366 Research Assignment

See description of EL364.

ELDR120 Drafting Fundamentals

Use of instruments, lettering and line wo electronic symbols and use in schematic d grams, development and production of pol to-point, highway, airline and wiring diagra Description of cable forms, wiring harness and locking devices, theory and layout printed circuits and production of printed cuit boards from layouts and artwork, line and polar graphs, vertical and horizontal b charts. Use of logarithmic paper. Simple ma control schematics. Two and three wire contr

ELDR120A Drafting Fundamentals (Tutorial)

A tutorial continuation of topics in ELDR120.

ELDR121 Drafting Fundamentals

Graphing, construction and types; pictorial drawing and sketching; design project; orthographic projection(if time permits).

ELDR123 Electrical Drafting

A.C. motor control schematic and wiring diagrams. Control schematics for squirrel cage induction motors, wound-rotor induction motors, synchronous motors. Reduced voltage starting for induction motor. D.C. motor control schematics and wiring diagrams; 3 and 4 point starters. Wiring diagrams: point to point and highway type.

ELDR123A Electrical Drafting 11A(Tutorial)

A tutorial continuation of topics in ELDR123.

ELDR123T Electrical Drafting

A.C. motor control schematic and wiring diagrams for squirrel cage induction motors. Wound rotor induction motor and synchronous motors. Reversing starters, reduced voltage starters. Sequence control for 2 or more motors. Design of simple motor control systems and relay logic.

ELDR124T Electrical Drafting

A.C. motor control schematic and wiring diagrams for squirrel cage induction motors. Wound rotor induction motors and synchronous motors. Reversing starters, reduced voltage starters. D.C. motors control schematic and wiring diagrams. Sequence control for 2 or more motors. Design of simple motor control systems and relay logic.

ELDR233T Blueprint Reading

Architectural symbols and conventions; mechanical symbols; electrical wiring symbols; interpretation of electrical drawings showing commercial and industrial installations; reading of ladder diagrams; conversion from wiring to elementary diagram.

ELDR237 Electrical Drafting

Development of control schematics for complex motor control systems involving interlocking, sequence control, forward reverse control and multispeed starting; including wiring diagrams and electrical layout drawings, motor controls center design.

ELDR243 Electrical Drafting

Transformer substation design; grounding arrangement, electrical arrangement, single and three line diagram and preparation of complete bill of material for the substation; relay and control panel layouts and wiring diagrams.

ELDR248 Architectural & Mechanical Blueprint Reading

Architectural, structural and mechanical symbols and convention; preparation of working drawings from architectural plans, sections, and elevations; interpretation of mechanical working drawings for heating, ventilating, air conditioning, plumbing and piping systems.

ELDR353 Electrical Drafting

Transformer substation design: grounding arrangements, electrical arrangements, single- and three-line diagram and preparation of a complete bill of material for substation; relay and control panel, layouts, and wiring diagrams.

ELTC100 Electronic Fundamentals

An introductory course: atomic theory, current flow, potential difference, resistance, ohms law, batteries, magnetism, permanent magnet, induced voltage, transformers, active devices, vacuum tubes, semi conductors.

ELTC101 Electrical Fundamentals Advanced

Combination D.C. resistive circuits; power and energy; application of theorems; magnetism; inductance in D.C. application; capacitance in D.C. applications; alternating current; inductance in A.C. applications, capacitance in A.C. applications; principles of L-C-R circuits; power in A.C. circuits, transformers; multiphase A.C. systems.

ELTC102 Electronic Fundamentals Advanced

Networks; L-C-R circuits, impedance, application of theorems, resonant circuits; filters; power supplies.

ELTC102A Electronic Fundamentals Advanced

Networks; L-C-R circuits; impedance; applications of theorems; resonant circuits; filters; power supplies.

ELTC102B Electronic Fundamentals Advanced

A continuation of ELTC102A.

ELTC102C Electronic Fundamentals—Advanced

Network analysis; phasor and advanced vector presentation of L-C-R and impedance networks; resonant circuits, series and parallel, graphic analysis and theorem applications; filters, types, frequency response, measuring methods; multiphase AC systems; generation of Y and delta configurations, phasor and mathematical relations, loading.

ELTC103 Amplifiers and Devices

Vacuum tubes; semiconductors; C.E. analysis, C.B. analysis, C.C. analysis, cascade amplifiers, frequency response, distortion, power amplifiers; semiconductor devices, F.E.T., unijunction transistor, S.C.R. traic, integrated circuits, operational amplifiers, oscillators; Armstrong, Hartley, Colpits.

ELTC103T Amplifiers & Devices

Vacuum tubes; semiconductors; C.E. analysis, C.B. analysis, C.C. analysis, cascade amplifiers, frequency response, distortion, power amplifiers; semiconductor devices, F.E.T., unijunction transistor, S.C.R. traic, intergrated circuits, operational amplifiers, oscillators; Armstrong, Hartley, Colpits.

ELTC104 Advanced Transistors

H parameters in two port networks; H parameters in active two port networks; C.E. circuits, C.C. circuits, biasing and stability; configuration comparisons; transistor ratings; quantitative analysis of cascade amplifier; large signal application, power amplifiers, class A, class B, class AB, integrated circuits; semiconductor devices, analysis of F.E.T. unjunction.

ELTC104A Advanced Transistors

Power amplifiers, class A single-ended, class A push-pull, class B push-pull, class AB, "L" parameters, model analysis based on network derivation of fundamental "L" parameters, "L" parameters in CE configurations, "L" parameters in CB configurations.

ELTC104B Advanced Transistors

A continuation of ELTC104A; "L" parameters in CC configurations; configuration comparisons; Q point dependency of the parameters; low, medium high frequency analysis; field effect transistors, JFET, MOSFET, UJT, SCR, TRAIC, SCS.

ELTC105 TV Principles

Basic transmitting principles; receivers (black and white), typical waveform and voltages, fault finding procedures; tuners, I.F.'S. video amplifiers sync separators, vertical and horizontal oscillators, horizontal output stage, picture tubes, sound circuitry; receivers (colour), colour principles, basic circuits.

ELTC106 Electrical Fundamentals

An introductory course; atom theory, current flow; potential difference; resistance; OHM'S law; resistive circuits; batteries, power.

ELTC107 Electrical Fundamentals II

An introductory course; magnetism, permanent magnet, induced voltage, electro—magnetism; A.C. generator; A.C. motors; transformers.

ELTC108 AM/FM Receivers

Principles of carrier transmission; amplitude modulation properties; receivers; FM stereo multiplex.

ELTC108B AM/FM Receivers Part II

FM receivers; limiters, detectors, de-emphasis alignment principles. FM stereo multiplexing.

ELTC109 Introduction To Motors & Generators

A.C. generators, D.C. generators, D.C. motors, single phase A.C. motors, three phase A.C. motors.

ELTC110 Introduction to Electrical/Electronics

Atomic theory, current flow, potential difference, resistance, OHM'S law, batteries, magnetism, permanent magnet. Induced voltage, transformers, active devices, vacuum tubes, semi conductors.

ELTC111A Applied Circuit Analysis

A tutorial in solving simple passive D.C. and A.C. circuits using the slide rule, and using basic algebraic and trigonometric manipulations in their solution. An introduction to time constants, and to circuits requiring solutions by quadratic equations.

ELTC111B Applied Circuit Analysis II

A tutorial in D.C. and A.C. passive network analysis requiring solutions, by complex algebra and determinants.

ELTC111L Applied Circuit Analysis Laboratory

A computer oriented course to reinforce ELTC111A and ELTC111B applied circuit analysis parts I and II.

ELTC111T Laboratory

Same as ELTC111B but taught using technology mathematics.

ELTC112A Laboratory

Laboratory exercises to reinforce basic principles plus building and testing a motivation project.

ELTC112B Laboratory

Laboratory exercises to reinforce theory lessons plus building and testing student chosen projects based on published information. Project built on printed circuit boards.

ELTC112C Laboratory

Laboratory exercises to reinforce theory lessons plus building and testing student chosen projects based on published information. Projects built on printed circuit boards.

ELTC112T Laboratory

Laboratory experiments for electronic technologists to reinforce the theory taken in ELTC102C, electronic fundamentals advanced, ELTC103T, amplifiers and devices and ELTC104A, advanced transistors.

ELTC114 Laboratory

Laboratory experiments for electrical technologists to reinforce the theory taken in ELTC103T, amplifiers and devices.

ELTC130 Electronics

During this course the student will gain theoretical and practical experience in lab to enable him or her to receive a good grounding in electronic circuitry. The course covers basic D/C circuitry, transistors and transducers calibration and use, lay-out and fabrication of circuits, MYO electrics-basic studies, MYO electric upper extremity prostheses electronic components and their applications and finally A/C theory (Micro Voltages). (48 Hrs.)

ELTC200 AM/FM Receiver Technology

Types of modulation, amplitude modulation, properties, mathematical development; frequency modulation, properties, mathematical development, Bessel curves and tables; receiver circuits, mixers, oscillators, detectors, tuned amplifiers, single, double and cascade amplifiers.

ELTC201 Wave Shaping and Control Devices

Non-sinsusoidal waveforms, harmonic analysis, transient and steady state conditions, wave shaping circuits; switching characteristics; multi-vibrators; control devices, unijunction transistor, S.C.R. Traic, S.C.S.

ELTC202A Logic Systems Part I

Computer arithmetic, signed number arithmetic, logic circuits, Boolean algebra, register circuits, decoder/encoder circuits, arithmetic circuits.

ELTC2020B Logic Systems Part II

Computer arithmetic, signed number arithmetic, logic circuits, Boolean algebra, register circuits, decoder/encoder circuits, arithmetic circuits. A continuation of ELTC 202A.

ELTC203 Computer Aided Design

Basic fortran programming; electronic ci
analysis program; PDP8 language.

ELTC203T Computer Aided Design

Basic fortran programming; electronic ci
analysis program; PDP8 language.

ELTC204 Solid State Operational Amplifier Design

Small signal design and analysis of differe
amplifiers; feedback amplifiers gain, ba
width, and distortion considerations; Nyq
and Bode plot analysis of frequency respo
operational amplifier parameters; analog
digital applications of operational amplifier

ELTC205 Communications Technology I

Communication Systems; noise, definiti
calculations, noise expressions; oscillat
crystals, crystal oscillators; amplitude mod
tion; modulating with complex waveforms, t
transmitter, class B & C signal analy
(Fourier): types of modulation grid, plate, ba
collector, measurements, antenna match
R.F. power amplifiers class A, B(1), B(2), C
C(2); A.M. communication receivers, requ
ments, R.F. amplifiers, convertor, I.F. amp
— variable bandpass, detectors; single
band, signal analysis, transmitter, recei
frequency modulation; signal analysis of dir
indirect F.M., phase modulation; modulati
methods, transmitters, noise.

ELTC207 Advanced Semi-Conductor Devices

H parameters in two port networks; H param
ters in active two port networks, C.E. circu
C.B. circuits, C.C. circuits, biasing and stabil
configuration comparisons; transistor rating
quantitative analysis of cascade amplifi
large signal applications, power amplifier
class A, class B, class AB; integrated circu
semiconductor devices, analysis of F.E.T.,
junction, S.C.R., traic, S.C.S. operational amp
fiers ideal and practical circuits.

ELTC208 Pulse Circuits

ion-sinusodial waveforms, harmonic analysis,
me constants, transient and steady state
nditions, wave shaping circuits, applications;
witching characteristics, wave shape definiti
n, switching with active devices; waveform
nerating circuits and applications, multi-
ibrators, astable, monostable, bistable (dis-
rete and OP, AMP circuits); triggering and
eering; Schmitt Trigger; other generators,
awtooth, Trapezodial, Blocking Oscillators.

ELTC209 Laboratory

n each course and each area of specialization,
aboratory periods will be given. The laboratory
xercises have been developed so that they
ill reinforce the materials given in theory, also,
he laboratory exercises emphasize measuring
echniques and principles. Because of the
ltimate goal in engineering technician train-
ng, "Hands On" laboratory training is consid-
red essential and, therefore, this phase of the
ourse is considered to be a major area of
tudy.

ELTC209A Laboratory

ELTC209B Laboratory

n each course and each area of specilization,
aboratory periods will be given. The laboratory
xercises have been developed so that they
will reinforce the materials given in theory, also,
he laboratory exercises emphasize measuring
echniques and principles. Because of the
ltimate goal in engineering technician train-
ng, "Hands On" laboratory training is consid-
ered essential and, therefore, this phase of the
ourse in considered to be a major area of
tudy.

ELTC210 Digital Principles

Digital arithmetic and coding; basic logic cir-
cuits and NOR, OR, NAND, exclusive OR, Flip-
Flops, R-S, clocked R-S, D-P type, J-K; Boolean
algebra, truth tables, Venn diagrams, Karnaugh
maps, deviation of logic equations, practical
applications; register circuits, storage, shift,
information transfer, counters; adders and sub-
tractors; basic computer system, A/D conver-
sion readouts, multiplexing displays.

ELTC211 Audio Principles

Acoustic fundamentals; elements of audio sys-
tems; basic layouts, audio transmission, at-
tenuators and mixers; ultrasonic and audio
transducers, microphone, loudspeakers, mag-
netic heads, optical, sound, measurement;
audio transport mechanisms; principles of the
Dolby systems; dubbing and editing principles.

ELTC212 Video Principles

Light characteristics; lens characteristics; lens
types; color principles and vision; light spectra
energy conversion; heat sensitive devices and
controls.

ELTC213 Communication principles

Amplitude modulation; AM transmitters and
receivers, single sideband theory and trans-
receiver systems, frequency modulations; di-
rect FM transmitters, phase modulation; FM
receivers; data transmission, coupling and
terminal.

ELTC215 Communications Systems

Transmission line parameter, types and imped-
ance matching problems; WG parameters,
Hardward and Smith chart applications; micro-
wave devices — active and passive (Klystrons,
Magnetrons, TWT, Bulk effect devices, Lasers).
Basic radar and typical application; multiplex
theory and frequency division systems, ap-
plications; antenna theory.

ELTC216 Computer Systems

Computer memories; magnetic core, solid
state, thin film; machine language program-
ming; peripheral equipment; teleprinters, high
speed printers, drum and disk storage units,
magnetic tape storage units, card and tape
readers, card and tape punchers, numerical
displays, graphical displays; analog/digital
conversion techniques.

ELTC217 Electronic Laboratory

This course will consist of projects and exercises related to equipment studied in ELTC218. See ELTC209A for department philosophy regarding laboratories.

ELTC218 Electronic Systems and Measurements

Investigation of the principles, applications and limitations of complex electronics instruments, wave analyzers, frequency meters, broad band pulsed sweep oscillators, digital display instruments, recorders and other modern electronic instruments.

ELTC219 ETV/TV Broadcast Maintenance Systems

Video systems and transmitting systems; SYNC generator, pulse distribution, NTSC generator signal, vectorscope, video amplifiers and switches, vertical interva test signal techniques, transmitter analysis and standards, basic CATV system; TV cameras; color and monochrome cameras, image conversion, color and monochrome cameras chain functions, matrixing devices; tape recorders, video tape systems, wideband recording, rotating head principles, telecine theory, film techniques, dubbing systems, telecine chains, film recording of video signals.

ELTC221A Laboratory

Laboratory exercises to reinforce the material given in theory.

ELTC221B Laboratory

Laboratory exercises to reinforce the material given in theory.

ELTC299 Technical Report

Every technician will complete a technical research report. This report is to be of at least 2000 words on a topic of present day technology.

ELTC300 Pulse Technology

Fourier analysis of repetitive waveforms, ana
sis of high pass C-R networks; analysis of l
pass C-R networks; analysis of L-R network
analysis of L-C-R networks; pulse transf
mers, ideal and practical; pulse delay lin
parameters, characteristic, response to puls

ELTC301 Communications Technology II

Transmission line parameters, propagati
constants, high frequency considerations
Smith chart design; RF amplifier design us
H, Y and S parameters; microwave active a
passive component theory and applicatio
multiplexing of data signals, frequency an
time division theory and design considerati

ELTC302B Computer Technology

Primary memory circuits, general requiremen
and types, magnetic core storage, thin f
memory solid state memory; central process
units, operation of basic CPU, adressing sch
mes, other CPU structures — one address,
accumulator, two address no accumula
stack memory timing and control circuits, b
structures, ROM, imput and output contr
peripherals, types of communication, p
ripheral devices — magnetic drum, disc, tap
imput output devices, keyboard/printed, h
speed printers, card reader/punch, paper ta
reader/punch; CRT displays; analog comp
ters, building blocks, analog computing comp
nents — prcision potentiometers, operation
amplifiers, multipliers, function generato
monitors, problem solving; analog/digital co
version; computer control of industrial p
cesses.

ELTC302 Computer Technology

Primary memory circuits, general requiremen
and types, magnetic core storage, thin f
memory solid state memory; central process
units, operation of basic CPU, address
schemes, other CPU structures — one addre
two accumulator, two address no accumula
stack memory timing and control circuits, b
structures, ROM, imput and output contr
peripherals, types of communication, p
ripheral devices — magnetic drum, disc, tap
imput output devices, keyboard/printed, h

speed printers, card reader/punch, paper tape
reader/punch; CRT displays; analog compu-
ters building blocks, analog computing compo-
nents — precision potentiometers, operational
amplifiers, multipliers, function generators,
monitors, problem solving; analog/digital con-
version; computer control of industrial pro-
cesses.

ELTC303 Automatic Controls Systems

Feedback principles, notation and definitions,
transform theory; feedback diagrams, bode
etc; basic elements of a system, charac-
teristics of a control system, control system
components, amplifiers and control elements,
analysis of control systems.

ELTC304 System Design Principle (Tutorial)

A tutorial introduction to ELTC304B.

ELTC304B Systems Design Principles Part II

Introduction, systems, sub systems, modules,
contractual and non-contractual requirements;
design requirements, sub systems made by
the same contractor, sub systems made by
different contractors; cost, maintenance com-
patibility, space requirements, warranty, deliv-
ery; case study; project selection.

ELTC306 Component Technology

Purpose of course, cost, reliability, environ-
ments, standards; components, physics and
construction, definitions and ratings, electrical
and mechanical limitations, environmental
effects, tests, resistors, capacitors, relays,
transformers, inductors, fuses, circuit breakers,
batteries.

ELTC309A Laboratory

Electronics Laboratory.

ELTC309B Laboratory

Electronics Laboratory.

ELTC310 Advanced Circuit Analysis

Analysis of circuits and driving function using Laplace transforms, Bessel functions, Fourier analysis and Matrix algebra.

ELTC315 Electronic Mechanical Design Principles

Packaging principles; materials and finishes; machine shop; fasteners; tools; layout; Chassis design; cost.

ELTC318 Advanced Circuit Analysis

ELTC399 Technology Report

This is a thesis based on the design project undertaken in ELTC304, Systems Design Principles.

ENA170 Enamelling I

Elementary theory and practice — applying enamel to metals. (48 hours).

ENA171 Enamelling

Special segment — enamelling accessories for fashion design students.

ENA180 Enamelling II

Enamelling II — Projects include basic holloware — plaques and basic jewellery application, i.e pendants, brooches, etc.

ENA270 Enamelling III

Advanced theory and practice — applications in jewellery. (32 hours).

ENA271 Enamelling — Jewellery

Enamelling for fashion design students, accessories for apparel. Semester L

ENA280 Enamelling IV

Includes course projects — cloissone, champleve, plique a jour.

ENDR102 Machine Drawing And Design

Selection of principal views using third angle orthographic projection drawing system. Sectional and auxiliary views. Graphs and charts. Axonometric drawing systems and dimensioning. Conventional drawing practices. Drawing office standards, dimensioning methods and systems. Preparation of detail working drawings involving tolerances, limits, machine fits and finishes. Machine details such as fasteners, keys, springs, taper pins, and their purposes, selection, and application. Thread systems; terminology, representation, specifications, standards and applications, materials of modern industry; ferrous metals, non-ferrous metals and plastics, SAE numbering system for steel, heat treatment of steel small tool operations. Technical sketching in the orthographic and the isometric systems. Drawing office systems and work routines; filing systems, change notes, design and layout procedures, printing of drawings, print distribution and records, common devices and mechanisms such as springs, cams, gears, clamps, permanent assembly of parts by welding, brazing and soldering. Types of welding, Canadian welding bureau symbols and recommended practices, design of fabricated and welded parts; special design and production techniques for welded products.

ENDR104 Pipe Drafting and Design

Introduction to pipe classification, jointing methods, and pipe fittings. Valves; types, function and design. Representation of pipes, fitting and valves by single and double line symbols, drawing methods; orthographic, developed, oblique, isometric and diagramatic, pipe bending and shop fabrication methods. Piping detail drawing using various techniques, and unit arrangements of manifolds, bypasses, drains and instrumentation connections. Selection of materials and equipment from catalogues. Pipe supports and hangers. Expansion joints and simple flexibility problems, pipe insulation.

ENDR107 Kinematics

Techniques of mechanism analysis, displacement (linear, angular); paths of points on rotating bodies, producing specific paths, images; to produce a given path, basic four bar crank and slider, quick return, reverse, etc. motion. Graphic analysis of motion velocity & acceleration, gear trains, cams.

ENDR113 Technical Drawing

This is a course designed to provide student the skills in O/P tracing. Free-hand drawing of the human body is specifically into this course. Line drawings, geometforms and progressions and isometric drawings are dealt with, as in blue-print readregarding machine components. (48 hours)

ENDR115 Structural Drafting

Industrial engineering, history of modern industry. Aspects of industrial organization management, plant, layout, location and construction. Materials handling, production inspection, quality control, control of production, time and motion study, material contplant and safety equipment, industrial relation and incentive payments, personnel selectiotraining, human relations and labour organization.

ENDR118 Descriptive Geometry

Orthographic projection, primary and secondary auxiliary views, basic descriptive geometprinciples, points, lines, planes, true lengand true shapes found by auxiliary views aby revolution, skew lines, piercing point oline and a plane, development of surfaces parallel lines, radial line and triangulatemethods.

ENDR119 Technical Drawing

Review of drafting equipment and instrumentstheir use, selection and care. Review of geometrical constructions, and terminologorthographic projection, principal views, pentechniques, alphabet of lines and basic dimensioning. Visualization problems involving missing lines and missing views, principal views alternate positions. Advanced detail workidrawings. Sectional views; full, half, offseremoved, and revolved. Conventional practicesand section lining symbols, small tool operations,surface finish, tolerance, dimensionproblems specifications and notes on drawings. The SAE numbering system for steel

technical freehand sketchings. Welding drawings. Standard welding symbols as authorized by the Canadian Welding Society. Assembly drawings, bills of material and estimating, manufacturing processes, heat treatment of steels. Electrical and electronic symbols, circuit diagrams and schematic diagrams, symbols for pipe fitting and valves. Piping standards and specifications, piping drawings. Isometric drawing and freehand sketching. The study of industrial blueprints and specifications.

ENDR123 Engineering Drawing and Design

Freehand sketching and machine drafting of various flow diagrams and plant layouts, utilizing standard and specially designed materials; handling equipment as used in industry.

ENDR130 Jig and Fixture Design

Freehand sketching and machine drafting of basic jig and fixture deisgns, emphasizing current production methods and organizations.

ENDR131 Jig & Fixtures Design II ATEC

Prerequisite ENDR130 or equivalent.

Freehand sketching and machine drafting of advanced jig and fixture designs. Emphasizing current production methods and organization.

ENDR132 Jig & Fixture Design III ATEC

Freehand sketching and machine drafting of assembly and welding jigs and fixtures and welding fixtures, emphasizing current production methods and organization.

ENDR134 Tool Design (Jig and Fixtures)

Freehand sketching and machine drafting of various jigs, fixtures, and other tools used in large scale manufacturing.

ENDR140 Die Design

Freehand sketching and machine drafting of basic blanking, piercing and cut-off and bending dies.

ENDR143 Drafting

Introduction to drafting fundamentals, auxiliary views, sections, dimensioning, applied geometry, fastening devices, basic electrical diagrams, blueprint reading, simple cams.

ENDR143A Drafting

ENDR143B Drafting

ENDR158 Drafting and Design

Drafting equipment and instruments, geometrical constructions in common use, one view scale drawings, linework, freehand lettering, orthographic drawings of machine parts, sectional views and auxiliary views, conventional drawing practices, dimensioning of detail parts for manufacture, notes on drawings, machining terms, specifications, pictorial drawings.

ENDR201 Drawing and Product Design

Detail working drawings of an advanced nature. Design layout drawings drawn from engineering information and specifications. Projects involving various types of bearings, cams, and gearing. Use of manufacturers' catalogues, standard parts, and engineering reference books. Manufacturing tolerances, allowances, machine fits and dimensioning systems as related to product design and manufacturing methods. Application of machine components including linkages, toggles, levels, eccentrics. Design principles and applications of basic gauges such as snap, plug. General design principles of jigs and fixtures. Application of commonly used jigs such as drill, plate, etc., and application of machine fixtures, basic principles and applications of structural drawing, checking drawings SAE codes and official specifications.

ENDR202 Manufacturing Processes

A study of the factors which determine the selection of manufacturing processes, casting processes; sand, permanent mould, injection. The forging process. Hot working and cold working, adhesives, powdered metallurgy. Plastics, thermoplastic and thermoset; materials, fundamental characteristics, principles of main processes. Design considerations, selection of materials, production methods and techniques. Welding; welding processes and their applications to product design, production techniques, and materials. Heat treatment of steels, production machine tools. Automatic machine tools used for thread cuttings, gear and cam production, computer control of machine tools. Sheet metal and heavy plate fabrication. Design and cost factors of production. Inspection and quality control. Assembly and testing. Visit to manufacturing plants and industrial organizations will form a comprehensive part of this course.

ENDR204 Design and Layout of Piping Systems

Arrangement of piping systems for steam, water, gas, oil, chemicals, using conventional layouts and interpretation of the relevant codes. Layout of equipment, pressure vessels and related piping in terms of efficient flow conditions, and clearance from structural features. Flexibility studies and arrangement of hangers, guides and anchors, pipe sizing and pressure drop calculations. Special applications for control valves, study of common operations, feed heating, condensing, evaporation, estimation of piping costs. Visit to industrial piping installations.

ENDR222 Descriptive Geometry

Principles and applications involving oblique surfaces, lines and points in oblique planes. Location of plane figures in oblique planes. Intersections of lines and planes, oblique lines, oblique plane and polyhedron, dihedral angles. The system of revolution for finding true length of oblique lines, true shape of oblique planes, dihedral angles. Use of counter revolution. Development of surfaces and intersected polyhedrons by triangulation. Pattern and development of drawings, bend allowances, semas, and methods of joining. Single curved surfaces, development of transition pieces. Double curved sufaces. Contoured surfaces and practical applications such as ships' sheer drawings, problems which pertain to a wide range of general machine and mechanical industries.

ENDR225 Materials and Processes

Study of piping and valve materials, with reference to A.S.T.M. specifications and codes. Welding types and methods. Welding symbols and design considerations. Processes used in food, drugs and petro-chemical industries. Principles of energy systems, atomic fission, fuelled, and hydraulic pollution control systems. Visits to industrial plant and utilities.

ENDR240 Die Design

Prerequisite: ENDR140 or Equivalent.

Freehand sketching and machine drafting of advanced banking, piercing and bending dies. Introduction to basic draw dies.

ENDR241 Tool Design Theory

Manufacturing engineering organization: cutting tool design, form tools, process planning, turret lathe, tooling layouts, automatic lathe, location and clamping theory, drill jig and fixtures principles, broach design, gauges, presswork, tooling economics.

ENDR242 Die Design

Freehand sketching and machine drafting of basic banking piercing, cut-off, bending, draw and progressive dies.

ENDR250 Industrial Engineering

The selection process of manufacture with case histories of materials handling, plant layout, product flow, cost analysis and maintenance requirements; the selection of equipment from engineering catalogues.

ENDR340 Die Design

Freehand sketching and machine drafting of advanced draw dies and complex bank, pierce and ben progressive dies.

ENG100 Language and Communications

Oral and written communication, the development of clear, concise, well organized communication with specific application to technical writing and oral presentations. Assigned readings. Development of logic and ideas. A study of the literature of the related technology. Written and oral presentations.

ENG100A Language & Communications

ENG101 Language and Communications

The form and punctuation of letters; the purposes and qualities of business letters; letters of inquiry, answers to inquiry, order, claim and adjustment, credit, and collection; the memorandum report; oral communication: panels and debates.

ENG102 Language & Communications

ENG103 Language & Communications

This course in English is offered essentially in two sections: (1) communication, and (2) literature.

Communication covers reading and writing reports, learning techniques, communication of ideas, public speaking and the structure of the essay.

The literature section covers novel, short stories, and films. (32 Hrs.)

ENG104 Business Communication

The qualities of business letters: the positive tone, the reader-oriented attitude, and the basic requirements of business communication; analysis of specific letters; request, response and acknowledgment, order, claim and adjustment; the formal report.

ENG105 English & The Legal World

ENG106 English & The Legal World

ENG107 Business Communications

Will provide the student with an understanding and a basic knowledge of business communications including technical reports, correspondence, memoranda, verbal communications, resumes, agendas.

ENG109 Language & Communications

In the first year, a course in English is offered to all students. Although there is flexibility in course content as determined by each master and class, the first year is essentially divided into two sections: (1) Communication, and (2) Literature.

Communication covers reading and writing reports, learning techniques, communication of ideas, public speaking, and the structure of the essay.

The literature section covers novel, short stories, and films, (96 hrs.)

ENG110 Language & Communications

English composition; effective English in Business Communication: rapid reading and comprehension: business letter writing; letters of application, sales promotion, credit, and collection; oral reports; novels.

ENG111 Language & Communications

Oral and written Business Communication; preparation and delivery of formal and informal speeches on related subjects; the precis; technical research report writing, using library

research. A study of an anthology of modern short stories.

ENG112 Business Communication

ENG151 Technical Report Writing

Review basic grammar and composition as required. Oral skills; employment interview, panel discussion, giving a talk. Economic, sociological and psychological factors influencing fashion.

ENG152 Vocabulary Of Furnishings I

Basic and oral skills, factors influencing fashion cycles, furniture terminology.

ENG162 Language Of Furnishings II

Manufacturers of fashion, apparel mass media and furniture terminology.

ENG181 Technical Report Writing II

Review basic grammar and composition as required. Oral skills: employment interview, panel discussion, giving a talk. Economic, sociological and psychological factors influencing fashion.

ENG200 Language And Communications

The preparation and delivery of formal talks and lectures on technical subjects. The philosophy of good writing. Technical research; study of basic library resources used in research. The technical report; organization and format. Assigned reading.

ENG200A Language & Communications

ENG200B Language and Communications

ENG201 English & The Business World

Vocabulary; grammar; punctuation; credit an collection letters; social and business letter the memorandum report; oral communicatio

ENG204 Business Communication

A review of fundamentals; the job gettin process; a statistical report; a memo servi letters; planning meetings and conferences oral communication; literature.

ENG205 Language & Communications

This course is intended to provide the studen with a vehicle for continuing development language usage. The principles of publ speaking and use of the media are emphasize (64 Hrs.)

ENG206 Language & Communications

The initial interval of study is a non-option, an is exclusively intended to outline and teach th formal technical report.

During this period, the planning, developmen and design of the formal research report described. Emphasis is placed on the signi cance of the report to the major subject an and to Liberal Studies.
Liberal Studies: The "Electives"

1. In lieu of students continuing in ENG 20 two intervals of electives may be availab The first will begin in October and conclu in February; the second will begin in Febr ary and conclude at the end of college ter
2. The electives offered will be the decision the individual campuses, but must be relate to those options outlined in the colle calendar under Liberal Studies.
   Thus, under certain circumstances, an a propriate selection of electives may chosen from the following:
   - ES 200: History of Ideas
   - ES 201: History of Science and Techno ogy
   - ES 203: Psychology
   - ES 205: Modern Literature
   - ES 211: Twentieth Century Thought a Current Issues
   - ES 215: Political Science — Canada
   - ES 216: Political Science — World
   - ENG 212: Technical Communication
   - ENG 213: Oral Communications
   - ENG 214: Communication Skills

ENG 211 Language & Communications

ENG 215: Advanced Communcation Skills

(Second Year: 64 Hrs.)

Language & Communications

ENG251 Technical Report Writing III

Literature pertaining to important eras of fashion history; cyclical movement of fashion. Basic business communication, ie. letters, memos.

ENG251A Fashion In Literature-Business Writing

Literature pertaining to important eras of fashion history; cyclical movement of fashion. Basic Business Communication, ie. letters, memos.

ENG252 Furnishing Terminology III

Emphasis on oral and written technical reports from trade publications. Writing personal resume and letter of application, employment interview.

ENG253 Technical Report Writing

ENG254 Technical Report Writing

ENG255 Technical Report

ENG261 Technical Report Writing IV

Career opportunities in fashion: manufacturing, retailing, advertising. Materials of fashion: textile fibers, leather, fur, trends in current market, psychology of dressing.

ENG262 Furnishing Technical Writing IV

Terminology of the furniture business. (16 hrs.)

ENG263 Technical Report Writing — Seminars

ENG300 Report Writing

This is a one semester course comprehensively covering most aspects of writing a major original thesis or report assigned by the electronics department. It will give the student step-by-step guidance in organizing, preparing, and composing a formal report.

ENG332 Business Communication

ENG400 Report Writing

The writing of concise reports in clearly understood technical language.

ENG401 English And The Legal World

This course will contribute to the development of the highly specialized legal vocabulary required and will also help to generate a first-rate general vocabulary. It will give extensive experience in transcribing accurately from the spoken word and will include punctuation, capitalization, and grammar. It will demonstrate man's view of law and justice as seen by fiction and non-fiction writers. Since the focus of attention is law, the student will be exposed to the extraordinary effect that the law in all its forms — legislative, judicial, ecclesiastical, and military has had on literature. This course will include research on the historical derivatives of current law and study of a manual for court reporting.

ES100 Effective Supervision

ES102 Instructional Techniques (Optional)

An elective option for those wishing to learn techniques for instructing in theatre arts.

FAB150 Fabrics I

Characteristics of fabrics requiring special knowledge re sewing, ironing, pressing,packing, molding, etc. (32 hrs.)

FAB151 Fabrics, Threads, Supplies

The selection of the right thread with the right needle at the right time; stitches, etc. for various fabrics, etc. (32 hrs.)

FAB152 Fabric I — Characteristics

Fabric testing, specifications, characteristics for special uses.

FAB160 Fabrics II

Further discussion on the variety of textile fabrics used in the apparel industry, including review of fibres, yarns, fabrics, knitting, weaving, dyeing and finishing.

FAB250 Fabrics III

The effect of fabrics on the apparel production process including sewability, effect of steam on shrinkage, use of specialized fabrics.

FAB252 Drapes And Slipcovers I

How to measure and make drapes and slipcovers I. (32 hrs.)

FAB261 Fabrics IV

Bursting, fading, abrasion, other fabrics such as plastics. (48 hrs.)

FAB262 Drapery And Slipcover II

How to measure and make drapes and s
covers II. (32 hrs.)

FAB361 Fabrics Testing Lab

Fabric Testing, characteristics for spec
uses, specifications.

FASH100 Fashion Business Procedure

Basic business knowledge and law; openi
business; licenses; taxes; (role-playing), s
(16 hours)

FASH110 Modelling

Fashion runway modelling — fashion show
self improvement. (32 hours)

FASH202 Managerial Accounting

A discussion of the Canadian apparel indu
including all major industrial, product,
geographic sectors, trends and relationship
retail and fabric industries.

FASH203 Managerial Accounting

Particular emphasis is placed on develo
the ability of the writer to handle the kin
terminology that is likely to be encountered
legal office, at an acceptable writing speed

FASH211 Fashion Business Procedure

Inventory-taking, controls, etc., costing; p
ing; sales; laws; consumer information, etc.
hours)

FASH213 Fashion Business Procedures IV

The apparel business procedures involved

designing, merchandising and selling a line in both men's and ladies' wear companies.

FBM200 Food & Beverage Management Projects

The practical application of food and beverage management techniques to real problems through case studies, seminars, workshops, research reports and field assignments.

FDR156 Blueprint Reading and Drafting

An introduction to dimensions, symbols and conventions used in blueprint drawings so that the student would be able to interpret a set of basic blueprints used in hotel or restaurant construction.

FIT100 Introduction to Fitness Testing

The course is structured to provide the students with a background of the human physiological tests that are presently being used in the field. The main emphasis is in testing techniques and the various limitations that are associated with each test.

FIT102 Applied Exercise Techniques

Psychology of exercise studies the components involved in total fitness and how they (social, emotional and physical) interact.

FIT103 Exercise Psychology

Effects of physical activity on the muscular, circulatory and respiratory systems of the human body are studied.

FIT201 Physical Fitness & Movement Evaluation

This course will study various habits of movement and will concentrate on a more intense analysis of the various tests covered in FIT100. A special section on coronary heart disease will also be covered in this course.

FIT202 Guidelines to Exercise Programming

Both a theoretical and practical approach to group and individual exercise programming will be presented. Basic principles and techniques of activity prescription are related to children, adults, athletes and industry.

FP100 Food Preparation I

The student is introduced to basic cooking by preparing basic stocks, soups and sauces followed by preparation of vegetables, rice, pasta products, egg dishes and the usage of basic flavourings, herbs and spices. Extensive instruction is given on the cooking of seafood, meats and poultry, and practice in the preparation of these dishes is arranged.

FP101 Food Preparation

The four basic stocks, the six basic sauces and their derivatives, the preparation of garnishes and their uses, rice cooking as entrees and appetitives, pasta dishes as entrees and garnishes, the roasting, broiling, steaming, poaching, boiling, deep fat frying and grilling of all meat, fish, poultry and game, egg cookery as entrees and garnishes, salads, and dressings, sandwiches hot and cold, preparation of hot and cold buffet. Cold buffet decoration, the use of herbs, spices and wines in cooking.

FP104 Food Preparation

Through lectures, demonstrations and laboratory assignments, the students will cover cold larder, vegetables, seafood, poultry, meat and offal, soups and sauces, farinaceous products, elementary baking, short order items and non-alcoholic beverages. In the second semester students will become involved in more advanced cold larder, vegetable, seafood, meat, poultry, soup and sauce preparation, as well as advanced desserts and dessert sauces.

FP200 Food Preparation

Advanced culinary techniques and practices following the "Brigade" system of classical kitchen including the following departments:

saucier, garde manger, poissonier, rotisseur, grillardin, entremetier, potager and patissier.

FP201 Food Preparation

A study of consumer demands in establishing parameters for research and development in the area of food products; the manufacturing and packaging used in the fabrication of convenience foods; quality testing; methods of reconstitution, methods of freezing.

FP203 Convenience Foods

A study of the influence of consumer demands in establishing the gross parameters of research and development in the industry. Explanation and study to do with the manufacture and packaging techniques used in the fabrication of convenience foods. Quality testing improvement and convenience requirements.

FR100 Conversational French

This is an introductory course dealing with the use of French in everyday life situations — at school, at work, shopping, travelling, eating out, seeking information, etc. Since this is a beginners' course, it is intended for students who have no previous knowledge of French or those with a limited knowledge of high school French. Students already fluent in French are not eligible for this option. Secretarial Science students will have first priority.

FR101 Conversational French Advanced

FT100 Food Products and Standards

Food products which are available to, and commonly used in, the hospitality industry are classified and discussed in specific Groups as to their grades, sizes, availability, marketing methods, standard containers, and quality factors; vegetables, fruit, dairy products, cereals, beverages, poultry, fish, shellfish and meats.

FUR146 Consumer Fur Education

A special module covering the recognition different furs and how they are described selling purposes — consumer education re and fashion. (32 hours)

FUR243 Fur Look-Alikes

Fur recognition using basic dressed and furs made to imitate more expensive species three families — lambs, felines, rodents.

FUR244 Fur Manufacturing Techniques

Dropping ("Let-out"); geometrics in fur. hours)

FUR244B Fur Manufacturing Techniques

FUR245 Fur & Leather Design

Fur and leather patterns, drafting, grading.

FUR247 Fur Buying

The skills and routines needed in buying and dressed furs at international auctions.

FUR248 Fur Buying

As FUR 247 with the addition of how to buy from dealers and fur coats for retail selling

FUR253 Fur Look-Alikes

Fur recognition as FUR 243 — five families canine, seals, plantigrades, weasel and cellaneous.

FUR254 Fur Manufacturing Techniques

Advanced practice in cutting and sewing

garments, trims with special emphasis on mink, muskrat.

FUR255 Fur & Leather Design

Drafting patterns and grading sizes for fur coats and leather garments — converting cloak patterns for use with fur.

FUR257 Fur Buying

Fur garments; auction sales; international markets. (16 hours)

FUR554C Fur Manufacturing Techniques

FURN101 Cabinet and Chairmaking I

The student will make a series of projects designed to cover the basic skills and techniques required in making cabinets and furniture. (64 hours)

FURN102 Wood Machining I

Safety precautions and practices that should be observed will be stressed. Principle operations of the basic woodworking machinery will be practiced. (48 hours)

FURN103 Furniture Finishing I

Surface preparation and basic colour treatments including straining and glazing, hand and spray application of varnish, shellac and lacquer. (48 hours)

FURN104 Upholstery I

Practical elementary upholstery including: sinuous springing, cutting, power sewing, stuffing, fabric application and trimming. (112 hours)

FURN104B Upholstery-Extension

FURN105 Materials I

Studies and discussions on materials used in the furniture industry. (48 hours)

FURN106 Technical Drawing and Blueprint Reading

Introduction to orthographic and pictorial drawing and elementary blueprint reading. (16 hours)

FURN108 Furniture Production Management I

Factory legislation, health and safety measures. Short history of the rise of the factory system. (16 hours)

FURN151 Cabinet and Chairmaking II

The student will make projects designed to add to his basic knowledge and skill of cabinet and chair making. This will include making patterns, veneering both flat and curved surfaces. (64 hours)

FURN154 Upholstery II

Practical upholstery including: Webb and coil springing, fitting fabrics and cushion filling. (112 hours)

FURN155 Materials II

Studies and discussions on materials used in the furniture industry, continued. (48 hours)

FURN156 Technical Drawing II

Intermediate orthographic and pictorial drawing. (16 hours)

FURN157 Furniture Design I

A history of design and evaluation of furniture from earliest times to modern times. (32 hours)

FURN158 Furniture Production Management II

Communication, method study, work study, production and quality control. (16 hours)

FURN162 Wood Machining II

Setting up and operating woodworking machinery in such operations as turning, shaping, routing, and making simple jigs will be included in this section. (48 hours)

FURN163 Woodwork Finishing II

Treatment of surface faults before and after finishing. Stripping and refinishing old furniture. (48 hours)

FURN163B Woodwork Finishing-Extension

FURN201 Cabinet and Chairmaking III

The projects that the student will be making in this section are designed to cover the advanced techniques and skills in cabinet and chair making. Simple carving will be included. (160 hours)

FURN202 Wood Machining (with FURN201)

Machining theory and maintenance, and making jigs, saddles and templates. (96 hours)

FURN203 Finishings III

Development of finishing systems. Application and use of special colour treatments including shading, bleaching, distressing. (224 hours)

FURN204 Upholstery III

Practical upholstery including: spring edges, channel backs, tufted backs and fan backs. Field trips to local upholstery shops a factories. (208 hours)

FURN205 Materials III

Studies and discussions on modern mater entering the soft furnishing industry. (16 ho

FURN206 Technical Drawing III

Advanced orthographic and pictorial draw (16 hours)

FURN207 Furniture Design II and Interi

Standard practices in the design of cab work and chair making. The physical relatio people to furniture. (32 hours)

FURN208 Furniture Production Management III

Purchasing, stock control and costing. (hours)

FURN209 Style Colour Textile I

Munsel Colour System. (32 hours)

FURN251 Cabinet and Chairmaking IV

The student will make furniture of his o design as well as repair, restore and renov old pieces of furniture. (160 hours)

FURN254 Upholstery IV

Practical upholstery including: Semi-attach backs, leather or leatherette application, a tique restoration and re-styling. Field trips shops, mills, exhibitions, etc. (208 hours)

FURN255 Materials IV

Materials used in antique upholstered furnitu (16 hours)

FURN256 Technical Drawing IV

Production made and custom made furniture drawings. (32 hours)

FURN257 Design and Interiors IV

The relation and arrangement of furniture to its environment. The student will also originate a project of his own design. (32 hours)

FURN258 Furniture Production Management IV

Small business management, and employer-employee and customer relations. (16 hours)

FURN259 Styles Colour Texture II

Munsel Colour System (cont'd). (32 hours)

FURN260 Costing Estimating (SBM132)

Estimating the cost of new upholstered furniture. (16 hours)

FURN262 Wood Machining IV

Advanced machinery techniques. Grinding and sharpening of saws, knives, and cutters will be covered as well as mechanical adjustments and minor repairs to wookworking machines. (96 hours)

FURN263 Finishings IV

Special hand and spraying techniques including French polishing, touch-up and restoration of defects in old or damaged finishes. (224 hours)

FURN264 Antique Upholstered Furniture

Studies of antique upholstered furniture and reproductions.

GD100 Still Life Drawing

Using diversified still life objects, drawing exercises will be carried out in various media with emphasis on: composition, line, proportion, shading and textures, in negative and positive form. The application of perspective will be taught in relation to interior renderings and outdoor sketching.

GD101 Life Drawing

A traditional approach to drawing based on the human figure. Understanding various attitudes, positions and movements using contour, gesture, diagramatic and progressive drawing.

GD102 Lettering

A thorough exposure is given, beginning with history, current usage, terminology and family, practical application is the keynote, commencing with pencil, pen, brush and felt tip. Coordinated with knowledge gained, emphasis is placed on devising letters to indicate special effects.

GD103 Design

The students will be taught two dimensional design in which a frame of reference will be used. They will be asked to use geometric and free shapes, arranging these shapes in a way to produce contrast value and textures. Some basic advertising layouts will be executed.

GD104 Science of Colour

An extensive study of the Munsell Colour System will be made. Rendering a colour wheel and producing various colour combinations using this system. Color value exercises will also be executed.

GD105 Museum Techniques

Using objects d'art, in a series of galleries at the Royal Ontario Museum, various techniques are applied to render commercially oriented projects.

GD106 Mechanicals

How to use materials and equipment to produce geometrical drawings and mechanical artwork. The use of amberlith overlays and keyline methods for camera ready artwork. How to operate the STAT camera.

GD107 History of Art

The students will be taught the basic history of art and how it relates to the present graphic design situation, so that they may use some ideas from history to develop for today's advertising art.

GD108 Illustration Techniques

The use of various commercial techniques such as black and white wash drawings, pen and ink techniques, felt pen techniques and techniques using designers' colours.

GD109 Typographical Design

Instruction will be given in the ordering and application of suitable typefaces, including basic measurements and copyfitting. Felt tip indication is stressed. In the second semester this knowledge will be applied to designing with actual type. Modern equipment is available for photo-composition.

GD111 Studio Graphics

The student will be required to design a newspaper ad using a felt pen for rendering and then produce a finished mechanical drawing. Additional design projects will be carried out using the same techniques.

GD201 Illustration

Concepts in books, magazines, newspapers, T.V. graphics. A course mainly concerning applied art, but also encompassing personal picture making.

GD202 Corporate Design

Students will be encouraged to give free to their abstract capabilities in this field graphic design, with emphasis on corpo images.

GD204 Printmaking

Three methods of screen-making will taught: Tusche, handcut, photographic these methods applied, using suitable ink print the students' own artwork.

GD205 TV Graphics

Prerequisite: Basic art training.

The student will produce layouts for progra titles, commercials, interludes and anima storyboards. Simple T.V. form, studio graph and 35 M.M. slides. Learning basic techni in animation, conventional and computer fo from storyboard, creative thinking and act art.

GD207 History of Art

The Bauhaus School and Art Nouveau a thoroughly examined; their connections w modern advertising. Trends are intensive studied.

GD209 Life Drawing

The various components which make up dra ings are explained, interpreted, and put i practice using live models. Students are e couraged to draw naturally rather than fro preordained methods of style.

GD211 Studio Graphics

Under studio conditions, students will execu package designs and complete one or two finished art work. In addition each will b mock-up of an annual report and carry o other graphic design projects.

GD212 Advertising Design

The design of more advanced newspaper layouts, also magazine layouts and a comprehensive advertising folder including the finished mechanical art for the projects. Additional design projects will be carried out as time permits.

GD213 Photographic Design

The basics of cameras and their accessories, films, lighting, dark room techniques and the production of graphic designs using photographs, photograms, and develart.

GD302 Illustration

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum portfolio of drawings on a given topic such as the civil war, developed at the 'A' level. Moving through to multi-media techniques which will be stressed, such as marker, pen, pencil, paint, dyes, paper etc. Each topic selected, for example, Indy 500 car race, will be executed in several media to a situation covering facets with emphasis on spot drawings in black and white and colour.

Problems will pertain to advertising, editorial and institutional illustration when a student selects to take all the A,B,C,D,E, & F levels. Life drawing may be an alternate to other illustration topics for either 3 or 6 hours per week.

GD303 Printmaking

is offered in two 3 hour increments, A & B to a maximum of 6 hours per week. It is classed as a minor subject in 3rd year. The number of hours devoted to the subject will determine the amount of work covered. At the 'A' level accent is placed on the preparation of artwork and reproduction to the finished stage by screen printing. The 'A' level is a pre-requisite to the 'B' level in which additional photomechanical methods of screen making are carried out using prepared artwork.

GD304 Package Design

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of package design continued from second year with more advanced designs at the 'A' level. Moving through the development of a series of packages for one company to make a family design to a situation covering facets of package design including the introduction of additional techniques such as flexible packaging.

GD305 TV Graphics

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. At the 'A' level, it would be a continuation of art work relating to TV graphics from second year. How to put it together with art work techniques — foreground and background. Additional levels would move through creative story board concepts to sell a product; how to get the most out of animation and going on to a situation covering the following additional facets of TV, graphics, camera and films effects — what animation camera can do for effects, when studied at all A,B,C,D,E and F levels.

GD306 Advertising Design

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of the design, rendering and preparation of advertisements for magazines and newspapers at the 'A' level. Moving through design in a more complex support media such as outdoor advertising, direct mail advertising and transit advertising, facets of the planning of complete advertising campaigns in multi-media (including television) from a marketing strategy. To help provide in-studio conditions, students at all levels are given individual assignments which are designed to complement their own strengths.

GD307 Photographic Design

Offered in two 3 hour increments, A and B, to a maximum of six hours per week. The areas covered will be at advanced level of the camera and its accessories, characteristics of films and lights, chemicals and their functions, film and paper processing in black and white and colour. Dark room techniques, experimental photography, photography applied to package design, T.V. graphics and advertising design. The number of hours devoted to the subject will determine the total work covered.

GD308 Studio Graphics

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of 4 themes; public relations booklet, magazine ad for consumer product, graphic design for liquor bottle at the 'A' level; and expanded through to a situation covering the following facets: concepts, discourse on concept, rough and comprehensive sketches and finished art (creative and mechanical) with special attention to advanced methods in the graphic art field.

GD309 Corporate Design

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in the third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of the research and design of a logo type at the 'A' level. Moving through to the application of the logo type to a letterhead, envelope and business card. Progressing on to other facets such as vehicle signage, book matches and annual reports.

GEM167 Gemmology I

Study of precious stones — cuts, shapes, etc. (32 hours)

GEM177 Gemmology II

Description of principal gem materials, synthetic and imitation stones and organic pr ducts.

GEM267 Gemmology III

Study of precious stones — leads to exams the Gemmological Association of Great Brita fellowship. (32 hours)

GEM277 Gemmology IV

Continuation of GEM 267 (Gemmology III) at more advanced level and includes use of gemmology instruments.

GEM367 Gemmology

Basic diamond grading techniques — definit colour, clarity & proportion.

GEM377 Gemmology

Final segment of grading, evaluation of d monds, including colourless and coloured d monds and achieving the final price.

GEM467 Gemmology

Study of precious stone — problems relating repairs.

GEM477 Gemmology

How to use old stones in redesigning o pieces.

GEO100 Forestry & Geology

Classification and recognition of trees an shrubs. Classification and recognition of miner als and rocks. Structural geology, soils e gineering reports, cartography. Work of wi rivers and waves. Glaciation, chronology a economic Geology.

GR100 Layout Design Typography

Basic principles of layout, design, and type face selection, typography in various media; newspapers, books, brochures, advertising, etc. The relationship of typography to other arts, preparation of layouts, copy fitting and mock-up for typesetting and principles of preparation of mechanicals, illustrations and other material for the printer.

GR101 Hot Metal Composition

Principles of type composition. Make-up of jobs using hand composition, Ludlow, saw, mitering machine and reproproof press. Job planning including considerations for printing and binding. Hot metal machines, their mechanisms, and operations. Preventive maintenance and safety regulations, setting of matter justified, Flush left, flush right, centered, leadered work and tabular, proof reading, typesetting a project, which will be printed.

GR105 Photomechanical Reproduction

A basic course covering the operation of process cameras. The calibration of process cameras and darkroom equipment for line, fineline and halftone negatives. The application of coloured filters and use of panchromatic film. Making photographic contacts, duplicates, spreads and chokes. The theory of photographic lenses, light sources, film emulsion and processing solutions.

GR110 Film Imposition & Printing Preparation

A basic course for black and white and line colour stripping. The course introduces job planning and layout of flats containing line negatives, halftone negatives, line colour negatives, halftone negatives, line colour negatives and duotones. Imposition is included with the preparation of folded dummies and layout sheets for various types of bookwork. Darkroom techniques for making photographic contact and the exposing and development of presensitized offset plates are an important part of this course.

GR114 Machine Printing (Letterpress)

Press equipment. Heidelberg Automatic Platen, Model "T" 10" x 15". Heidelberg Automatic Cylinder 15" x 20½". Course covers safety, housekeeping, lubrication, paper handling, press familiarization, set-up and adjustments, feeder and delivery, imposition, register, packing and makeready, letterpress inks, paper stock, running problems and corrections.

GR115 Machine Printing (Basic Offset)

A beginners' course covering the fundamentals of offset lithography, feeding dampening systems (both conventional and alcohol), ink control, and running of one colour and multi-colour and process colour projects. This program leads to GR116.

GR115A Machine Printing (ADV Multilith)

Prerequisite:Completion of GR115X or a working knowledge of 1250 multiliths.

Advanced course in offset lithography covering feeding, dampening systems (both conventional and alcohol), colour control. Two multi-colour and process colour projects. This program leads to GR116.

GR116 Machine Printing (Offset)

Larger single color presses, good housekeeping and safety, lubrication, measuring instruments and devices for pressmen. Cylinder arrangements. Dampening system, conventional and with alcohol, inking and register systems. Plate, paper and ink as related to the pressman. Successful operation of a single color press.

GR125 Bindery

Introduction to programmable guillotine cutter and basic cutting. Introduction to 17½ X 22½ and 20 X 26 Baum folders and basic folding. Operation of Bostritch 19E hand stitcher. Operation of paper drill and round cornering. Basic hand binding and foil stamping. Handling materials.

GR200A Monotype Keyboard Basic-Intermediate

Prerequisite: Hand composition and typewriting ability to speed of 40 WPM on a ten-minute test.

Monotype keyboard system; this course involves the setting of straightforward matter; flush left; flush right; centered; leaderwork; and balance sheet modes. Persons completing this course successfully should find little difficulty adapting to any keyboard system, which are, if anything, simpler. For those lacking typing skill, attention is drawn to the George Brown College's Lumisonic typing course.

GR202 Photocomposition Keyboard Tape Film

Operation of AKI keyboard, Merganthaler VIP, Daylight processor; and operation of CG7200 display unit. Font grid changing procedures; main memory and width table loading. Correcterm operation. Basic VIP operating principles and comparison with Photon 713-10/20. Format writing and storage. Routine maintenance.

GR202A Photocomposition-Basic

This course is intended to fulfill the need for training in fundamental typesetting and phototypesetting concepts before the candidate enters GR202B Photo-composition (operation). The course may also be of value to those employed in typesetting related jobs. Course content: type face recognition, type size recognition, the Printer Pointe System, mark-up fundamentals, typographic style considerations, proofreading, a short history of phototypesetting, various kinds of computer typesetting systems in use and their applications. The course will be taught by workshop methods as far as possible. Typing skill will be an asset.

GR202B Photocomposition-AKI Keyboards

Prerequisite: Typing to a level of 25 W.P.M. minimum (to obtain employment 50 W.P.M. is usually required), some knowledge of basic typesetting concepts, or permission of instructor.

Special students: employers, salesmen, etc., women, and nonproduction personnel may take this course as special students. Such persons should make known their intention to the instructor at the start of the course and will be given a grade of "K", (failure to follow the above procedure may otherwise result in a grade of "F".) Preference will be given to those seeking employment in the skill of keyboard operation.

This course is an individual learning program in which students may progress at their own speeds. The course covers all the basic machine instructions to the VIP and ranges in difficulty from straight text setting to complex tabular. Some storing and formatting is given.

GR205 Photomechanical Reproduction

An advanced course in halftone photography and machine processing. Includes the operation, maintenance and control of film processors, use of reflection and transmission densitometers. The calibration of various types of contact screens to camera and processing conditions. Making duotones and other techniques. An introduction to colour separation procedures.

GR208 Photocomposition — Basic Maintenance

Prerequisite: Employment in a typesetting related field, or permission of the instructor.

Designed to teach basic maintenance on the Mergenthaler VIP. The content will cover optical cleaning and adjusting; reader maintenance; general mechanical and electro-mechanical servicing; filmstrip care; and other related matters. In addition, repair of AKI Keyboard will be taught. Processing of job tapes and program tapes will also be taught.

GR210 Film Imposition Printing Surface Preparation

Advanced techniques in black and white, two-colour and four colour process stripping are introduced. Also included are: contact work and making spreads and chokes, the preparation of various types of offset lithographic plates. Step and repeat methods and an introduction to the programming and operation of a photocomposing machine.

GR214 Machine Printing (FLEXO)

Press equipment is a two-unit "Lembo" flexopress. Course covers safety, housekeeping, lubrication, roll feed and web tension, the printing unit, flexographic process, services on press of air, water, gas and electrical controls, oven drying, roll rewind, circulating pump for inking system, flexo inks and their compatible solvents, ink viscosity measurements, rubber plates, Anilox rolls, ink metering system, position and register, substrates, running problems and corrections.

GR215 Machine Printing (Rotogravure)

Press equipment is a four-unit "Lembo" rotopress. Course covers safety, housekeeping, lubrication, roll feed and web tension, the printing unit, Rotogravure process, services on press of air, water, gas and electrical controls, oven drying, roll rewind, circulating pump for inking system, Toto inks and compatible solvents, ink viscosity measurements, doctor blade finishing, position register, substrates, running problems and corrections.

GR216 Machine Printing (Offset)

Offset lithography on single colour Heidelberg, Harris and Miehle presses at the intermediate level. Course content emphasizes colour matching and projects. Projects run during this course will include one colour, multi-colour and process work.

GR217 Machine Printing (2 Color Offset)

Offset lithography on two-colour Harris and Miehle presses. Fundamentals of two-colour offset lithography, feeding, inking systems, dampening systems, (conventional and alcohol), press familiarization, theory and practical application of two-colour offset printing. This course leads to advanced pressmanship.

GR220 Quality Control

Sampling methods. Statistical probability and inference. Laboratory records. Specifications. Laboratory testing of physical properties of various printing substrates. Laboratory testing of physical and printing properties of various inks. Characteristic curves of films and the effect of varying the conditions of storages, exposure and processing. Safety and environmental factors. Visits to quality control. Laboratories in the graphic arts and related fields.

GR225 Bindery

Intermediate cutting. Intermediate folding and introduction to 26 x 40 Baum folder. Operation of Muller gathering machine. Introduction to Cerlox binding and thesis binding. Introduction to adhesive binding. Job planning.

GR225A Binding & Finishing

See GR125A.

GR225B Binding & Finishing

See GR125A.

GR250 Electronics

Familiarization with electrical systems as applied to graphic arts machinery, followed by simplified electron theory. Theory is applied to a wide range of electrical and electronic devices to enable the student to conduct preliminary trouble shooting using schematics and simple test equipment following proper safety procedures.

GR300 Typographic Design and Layout

Typographic design principles and copy fitting problems followed by production of layouts. Assignments will involve the designing of a set of business stationery, a six page brochure, and a number of tabular items. Each student will be required to formulate a house style in keeping with current trends. All work is produced by the student on the VIP phototypesetter.

GR301 Computer Peripherals and Typesetting

This course develops the ability to apply computers to typesetting. It involves the terminology of computers and discussions of both general purpose and special purpose devices. Each student is required to rewrite a width table for the photon 713-10/20. Pairs of students are sent out to plants employing diverse phototypsetting devices to gather data on which to lead class discussions on the various systems.

GR302 Paste-Up and Film Assembly

Paste-Up is taught at the beginning of this course but the emphasis is one assembly of positive film. Two colour forms are assembled using a register pin system and mylarbase. The level of work reaches that of the leading typesetting houses. In addition, contact printing and headlining are taught.

GR303 Photocomposition Tape Input

Input will be by raw tape perforator, programmable keyboard, and counting keyboard. Correction will be by CRT terminal. In the counting keyboard session, comparisons will be made to the Monotype system. Out-put will be Mergenthaler VIP. A high standard of accuracy is demanded of students and the level of work will be in the order of tabular, shape and catalogue typesetting, the final part of this course will be formation.

GR304 Advanced Keyboard Techniques

The operation and theory of more sophisticated couting keyboards; the uses of programmable keyboards; the advantages and disadvantages of such systems as the monotype keyboard and the dvorak keyboard. The student will be expected to produce several items of work using the monotype, the AKI-PCI 120 and the MPM6 counting keyboard.

GR305 Photomechanical Reproduction

A course designed for students with line and halftone experience. Covers direct and indirect colour separation procedures by various meth- ods. Colour correction by photographic mask- ing. Basic colour theory. Making screens, positives and contrast control, using CC filters, includes the operation and control of film processors, densitometers, enlarger and re- lated equipment.

GR306 Photomechanical Reproduction

Covers the study of tone reproduction for blac- and white and colour printing. The manipulatio of tones taking into consideration the characteristics of the press, paper, plate, film and processing conditions and the copy to achieve quality reproduction on the printed sheet. practical application of tone reproduction stud using camera, enlarger and contacting.

GR307 Photomechanical Reproduction-Gravure

Introduction to reproduction for the Gravure printing process including making of continu- ous tone negatives and positives, halftone negatives and positives with the Gravure screen for monotone printing. Transparent masking and colour separation for colour. Use of carbon tissue in transferring the image to copper, etching the copper and proofing resul- ing plates.

GR308 Photomechanical Reproduction-Scanner

Prerequisite: Completion of GR305/Gr306 or equivalent trade knowledge. Principles of scanning, E & D curve and other sensitometric applications, gradation and colour compute screening, proofing, future trends.

GR310 Film Imposition and Printing Preparation

The emphasis at this level is on four colour process stripping procedures including the preparation of flats containing chokes and spreads, fake colour and colour separation. Colour charts are prepared by the student incorporating the various screen angles and tints. Further experience will be gained in manual step and repeat methods and machine photocomposing.

GR311 Film Imposition and Printing Preparation

This course provides for the practical applica- tion of all previous courses on this subject in the areas of contacting, stripping photocom- posing and job planning. It will also include platemaking problems and their solution and prepress colour proofing methods.

GR312 Film Imposition and Printing Preparation

This is a combination of camera, stripping and platemaking that allows the student a number of choices that include completing a project through camera, stripping and platemaking, or performing practical work in any one or more of these areas.

GR314 Die Cutting & Embossing

Following a refresher or instruction on platen and cylinder press as required, the course will cover die manufacturing processes; die cutting and creasing; perforation slot cutting; plate sinking; hot and cold embossing and a demon- stration of foil stamping.

GR316 Machine Printing Two-Colour Offset Press ADV

Register, cylinder arrangements, application of pH, pressroom chemistry, paper, ink, colour matching and densitometer application. Pro- jects run during this course will include two- colour, mult-colour and process colour work.

GR317 Machine Printing Rotogravure ADV

Exercises in two and four colour rotogravure printing.

GR318 Machine Printing Flexo ADV

Projects in Flexographic printing on various substrates.

GR319 Multi-Colour Press Projects

Advanced colour projects on coated and other substrates.

GR320 Process Colour Press Projects

Special individual printing projects selected in co-operation by the student and instructor to develop the student's capability on particular presses. Special attention will be paid to colour control and all aspects of importance in commercial work.

GR322 Cold Type Mark-Up

This course introduces student to various methods of mark-up currently in use. It begins with hotmetal mark-up and then progresses to cold-type mark-up, culminating in mark-up for computer typesetting. The kind of difficulties experienced in the use of different output units will be discussed. Students will be encouraged to develop a mark-up system of their own. All work produced is typeset using the VIP phototypesetter.

GR325 Bindery-Guillotine & 17 x 22 Baum folder

Programmable Guillotine cutters. Baum folders 17 ½ x 22 ½ and 20 x 26.

GR325A Binding & Finishing

See GR125A.

GR325B Binding & Finishing

See GR 125A.

GR326 Bindery

Gathering & Adhesive Binding

GR327 Bindery Advanced Folding 26 x 40 Baum

Advanced folding. Baum folder 26 x 40 and Stahl combination Buckle/Knife folder.

GR328 Bindery Stitching Machines

Muller automatic stitcher/Trimmer, Christensen Gang Stitcher, and Hand Stitchers.

GR329 Bindery & Sewing Machines

Sewing machines and rounding/backing machines.

GR330 Bindery Foil Stamping & Casing In Machine

Major in bindery. Techniques in set-up and trouble shooting are covered in each course. A minor option in bindery consists of parts of courses GR324, GR326, GR327 and GR328.

GR350 Graphic Arts Administration Processes

Cost estimating and production control techniques are covered in a case study approach with a dummy corporation establishment. This subject prepares a student to enter estimating and production control.

GR351 Technical Report Writing

A major technical report is required related to a technical aspect of the area of major specialization. Techniques, report writing and direction in research methods will be provided by the academic division.

HBE400 Human Behaviour Ethics And Legal Implication

Focuses on the legal and ethical responsibilities and rights of the nurse, patient and health agency in critical situations and on the psychological reactions of persons undergoing stress.

HEAL101 Athletic Injuries

This course will deal with subject material in Red Cross standard first aid in the first semester. The second semester will consider recognition, evaluation and treatment of common athletic injuries.

HEAL201 Guidelines for Activity-Special Cases

This course will expose the students to guidelines of activity and recreation for individuals suffering from physical, neurological and sense-related abnormalities.

HEAL202 Advanced Exercise Technique

This course develops the students' motor skills in various racquet sports by discussing various training and teaching methods along with actual game experiences.

HEAL203 Business Management Skills

This course will study the business procedures which are involved in running a small business. A special section dealing with human relations will also be covered in this course.

HIND100 Dimensions Of The Hospitality Industry

History; scope; organization; problems of, and opportunities in the hospitality industry. Discussions of the organization, the departmental functions, and the operational differences of various types of hotels, restaurants and food operations.

HIND101 Food Orientation

History; scope; organization; problems of, and opportunities in, the food service industry. Discussions of the organization, the departmental function, and the operational differences of various types of food operations.

HIND104 Menu Planning

The history of menus and their current use as food merchandise catalogue. Planning the well-balanced menu. The classical menu and various menu forms in various food service establishments, the limited, specialty, table D'Hote, A La Carte and cyclical menu planning. Costing and pricing the menu.

HIND105 Menu Planning

The history of menus and their current use as food merchandise catalogue. Planning the well-balanced menu. The classical menu and various menu forms in various food service establishments. The limited, specialty, table D'Hote, A La Carte and cyclical menu planning. Costing and pricing the menu.

HIND106 Front Office I

The organization of the front desk, its importance to the guest and the hotel. A study of the methods, records and routines used in room reservation, guest registration, cash control and guest charges. Practical instruction on all front office equipment, including the key, mail, information and room racks, front office salesmanship and psychology.

HIND107 Front Desk Procedures

The organization of the front desk, its importance to the guest and the hotel. A study of the methods, records and routines used in room reservations, guest registration, cash control and guest charges. Practical instruction on all front office equipment, including the key, mail, information, and room racks, front office salesmanship and psychology, control of "Skippers" and all other problem guests through established credit policies. Extensive instruction in night audit procedures, balancing the day's business through the practical use of the N.C.R. 4200.

HIND108 Mixology

Bar layout and equipment, history and manufacture of alcholic beverages, beverage preparation theory, practical preparation of the bar.

HIND110 Wine Comprehension

The history, mystique and ritual of wines from the standpoint of types, vintages, handling and storage, the techniques of wine service merchandising and preparing of wine menus. The tasting of popular Canadian and imported wines. Identifying the role of wine in cooking and L.C.B.O. regulations regarding service.

HIND112 Dining Room & Lounge Organization

To provide the student with techniques to control staff and equipment for dining rooms and lounges. Develop techniques to assess quality of competition. Establish food and beverage policy, including employee uniforms, grooming forecasting and scheduling. Develop ability to carry out customer relations, supervise service, cash and charge and closing procedures. Recognize good decore and plant layout.

HIND113 Work Experience

Working under the supervision of qualified chefs, the student will be assigned to a kitchen in industry for on-the-job work experience. The student will rotate through each section of the kitchen and be marked on his/her performance in each task assigned.

HIND200 Function Organization

Organization and functions of the banquet department within food services operations and hotels. The Banquet Sales Office, types of banquets, their booking, control, planning, set-up and service procedures. The banquet bar, table arrangements and table settings.

HIND201 Housekeeping

The organization, location, function and importance of the Housekeeping Department. Duties of the housekeeper, inspectress, and maid. Purchase specifications, storage and issue control of linen and other supplies. Cleaning of carpets and walls, the equipment, layout and function of the hotel laundry.

HIND202 Banquet Management

Organization and functions of the banquet department within food service operations and hotels. The Banquet Sales Office. Types of banquets, their booking, control planning, set-up and service procedures. The banquet bar, table arrangements and table setting.

HIND203 Facilities Design & Planning

Discussion of significant points in the planning process for new or remodelled food service operations, including creation of image, critical flow patch analysis, technical drawings and detail, blueprint readings, selection of equipment and communicating these ideas in an over-all food facility layout plan presentation.

HIND204 Facilities Design & Planning

A basic understanding of the principles of service including table setting, order and techniques of service, timing co-ordination, customer relations; flambeed entress and desserts; dining room organization,; wines, spirits and liqueurs.

HIND205 Food & Beverage Service

Both theory and practice in dining room set-up and organization, table arrangements, purpose and use of various dishes, glassware and cutlery. Reservation control. French, Russian and American table service. Taking the order and "selling" the customer. Gueridon cooking and carving of food at the guest's table.

HIND207 Front Desk Procedures

HIND208 Work Experience

The student is introduced to the reality of the food service and hospitality industry by spending one complete day per week as an on-the-job trainee in either a hotel or food complex. The student is able to relate his classroom instruction to actual operating procedures. Guidance and evaluation is given to each student as to his performance and suitability.

HIND209 Work Experience

The student is introduced to the reality of the food service and hospitality industry by spending one complete day per week as an on-the-job trainee in either a hotel or food complex. The student is able to relate his classroom instruction to actual operating procedures. Guidance and evaluation is given to each student as to his performance and suitability.

HIND210 Personnel Management

Responsibility for Personnel Management types of organizational structures. Establishing job requirements through job analysis, job description, job specification, job classification and job evaluation. The hiring function, recruiting, interviewing and selection. Job performance appraisal. The Human Rights Code and the Employment Standards Act.

HIND214 Hotel Interior Design

Achieving atmosphere through the use of various furniture period styles, colour schemes, window treatment, wall and floor coverings, construction specifications for furnishings which determine price, room decorating and furnishing costs, the guest room layout and floor plan.

HIND216 Management Practice (Co-op)

The student is involved in the day-to-day management of the relevant department of a hospitality operation. Working alongside the head of the department the student is given exposure to the management responsibilities of a department under actual operating conditions.

HIND217 Management Practice

The student is involved at the department head and management level in the operating of either a hotel or food complex, for two days per week. This allows him/her to implement, under supervision, the I-½ years of classroom and laboratory instruction he/she has already received and also gives the student some practice, under supervision, in managing various areas of a business under actual operating conditions.

The student works along side of the Department Head and is given extensive exposure to the management responsibility.

HIND219 Management Techniques

Management by objectives, organization charts; anticipation and identification of problems, developing and implementing solutions to problems; establishment of policies; planning and evaluation, corrective actions.

HIND220 Equipment & Maintenance

Operating manuals, preventative maintenance programs safety measures; cleaning and care; maintenance reports, service contracts, minor repairs, maintenance logs.

HIND221 Housekeeping

HIND222 Front Office Operation

Based on HIND106, Front Office Operations deals with the control of "Skippers" and all other problem guests through established credit policies. Extensive instruction in night audit procedures, balancing the day's business through the practical use of the N.C.R. 4200.

HIND223 Sundry Services

A study of additional services available to customers of hotels, and food and beverage operations: Evaluation of ownership versus concession, franchise and lease, as to the most suitable method to meet guest needs. Evaluate and develop an entertainment policy. To select, book, control budgets within the entertainment policy. To co-ordinate sundry services and merchandise and sell these additional services to our customers.

HIND224 Hotel Management Projects

The practical application of hotel management techniques to real problems through case studies, seminars, workshops, research reports and field assignments.

HIND225 Facilities Design & Planning

Discussion of significant points in the planning progress for new or remodelled food service operations, including creation of images, critical flow path analysis, technical drawings and details, blueprint readings, selection of equipment and communicating these ideas in an over-all food facility layout plan presentation.

HIST100 Dental Histology & Embryology "A"

During this series of lectures and laboratory assignments, the student will be exposed to the detailed development of the dental tissues from conception to maturity. This course is designed to complement and expand on previous knowledge acquired. This course is designed to familiarize the student with cell cytology and basic tissue histology, which includes epithelial and nervous tissues. Wherever possible, reference is made to the dental structures. (34 hrs.)

HIST400 Dental Histology & Embryology "B"

The program will build on previously acquired knowledge of body tissue, emphasis will be placed on oral histology and embryology including the development of the tooth, its surrounding structures and the salivary glands. (16 hrs.)

HOUS111 Housekeeping

Inform residents of proper garbage disposal procedures; maintain program of litter control; maintain hygenic standards through proper use of materials and methods; maintain a program of positive sign control; e.g. parking, fire lanes, swimming pool; establish and institute program of snow and ice removal; inspect, maintain and control established standards; schedule suite cleaning on turn-over; establish techniques and methods of cleaning; establish cleaning standards and routines.

HR200 Personnel Management

Many graduates from dental programs are expected to assume managerial positions within the labour force. As such, it is expected that they will have competence in dealing with interview techniques, personnel selection, management and adminstration concepts. These areas form the basic background for this program. (17 hrs.)

HT104 Heating

Theory of oil, gas and electric heating systems. Types, properties and characteristics of fuels and other forms of heat energy. Combustion; types, characteristics, principles of heating equipment, and accessories including steam, hot water, forced air and various types of electric systems, installation codes and practices.

HT114 Heating

Flame detection devices, firing systems, firing sequences and programs, logic diagrams, combustion controls: non-programming and programming. Flue gas analysis and boiler efficiency, boilers, valve train assemblies (C.G.A. and C.S.A. requirements), wiring diagrams, muliple hook-up heating. Firing of commercial oil and gas burners, wiring and control design for systems in the laboratory, flue gas analysis and conducting boiler testing.

HUMN101 Humanities "A"

This course is an examination of several contemporary value systems as they contribute to the concept of dignity and freedom, both personal and societal, with particular attention to such notions as human rights and responsibilities, authority and accountability. (55 Hrs.)

HUMN201 Humanities "B"

This course provides the opportunity for discussion and application of the concepts from "Humanities A" to specific issues and situations related to the practice of nursing. This will include exploration of the evolution of the nursing profession, and the rights and responsibilties of the nurse. (55 hrs.)

INS100 Principles & Practice Of Insurance

INS101 Insurance On Property I

INS102 Automobile Insurance

INS200 Insurance on Property II

INS201 Insurance Against Liability

INS202 Loss Adjustments & Claims Settlements

INS205 Property Loss Adjustments

INS206 Casualty Covers

INS207 Burglary & Fidelity Insurance

INS211 Insurance

INST100 Measuring Principles

The theory and basic concepts of measurement of pressure, vacuum, fluid flow, level, temperature. The principles, construction, maintenance of mechanical and pneumatic devices to make the aforementioned measurements. Instruments will be disassembled, assembled and calibrated. Design and fabrication of control loops for measuring levels such as zip tubes, wet and dry leg utilization of DP cell and zero suppression.

INST100T Measuring Principals

See description for INST 100.

INST101 Electronic Instrumentation

This course reviews basic theory and explores the concepts of pressure level flow and temperature transducers, bridge and potentiometric devices. The application, calibration, operating and maintenance procedures of the following instruments: electronic DP cells, Honeywell Electronik, Leeds and Northrup, models G and H, Taylor temperature transmitter, radiation and thermoelectricity are also covered.

INST101T Electronic Instrumentation

INST103 Piping & Instrument Laboratory Techniques

This course explores all of the principles of safety in shop practice followed by: use of hand tools, tube fittings, tube bending, pipe fittings, piping practice, hand valve selection, soft and hard soldering.

INST105 Industrial Process Instrumentation

INST108 Instrumentation Fundementals

Introduction to measurement and control. Pneumatic, mechanical and electrical transducers. Basic theories of automatic control.

INST110 Instrumentation

Applied electrical and electronic theory, pneumatics and hydraulics. The study and application of devices used in orthotic-prosthetics for the testing of anatomical functions and the control equipment related to artificial limbs and braces.

INST112 Applied Control Theory

INST130 Instrumentation

Prerequisite: Employed in instrumentation or associated field. Applied physics: pressure, level, flow, temperature measuring devices; pneumatic and electronic transmitters, recorders, and controllers; final control elements, valve sizing, analytical instruments.

INST200 Automatic Control Principles I

Process characteristics, responses of components and systems, energy characteristics, the block diagram, open and closed loops, ratio, cascade, remote-set control loops, development of controller actions, proportional, reset, and rate, tuning a loop.

INST200T Automatic Control Principles

See description for INST 200.

INST201 Final Control Elements

Valve positioners, control valve sizing and their proper application, trim characteristics, seating materials, packing materials, cavitation, flashing, diaphragm materials, split body design, V-ball valves, damper motors, I/P converters, electric and hydraulic valve operators.

INST201T Final Control Elements

INST202 Analytical & Environmental Instrumentation

A study of the principles of measurement, application, operation and maintenance of

analytical instruments in the following areas: oxygen analysis, combustion, gas chromatography, pH, conductivity, nuclear radiation, humidity, viscosity, specific gravity.

INST202T Analytical & Environmental Instrumentation

See description for INST 202.

INST203 Computer Control Principles I

Fundamentals and application of analog computers, fundamentals and application of digital computers, input-output devices, and data conversion, programming and application to process control.

INST204 Applied Solid State Electronics

Power supplies, oscillators, multivi-rators, time control, transistor amplifiers, integrated circuits.

INST209A Laboratory

INST209B Laboratory

INST221B Laboratory

INST299 Technical Report

INST300 Automatic Control Principles II

An extension and more intensive study of automatic control Principles I. Exponential lag, step response and frequency response, dead time, lag-step and frequency response, process combination, frequency response method and step response method, controller forms, process and controller combinations, elementary system stability, the closed loop and disturbances.

INST301 Computer Control Principles II

An extension of computer control Principles. Interfacing A to D, and D to A conversion, exposure to software and programming, pneumatic and analog computers, fluidic logic and control.

INST302 Systems Design and Construction

Each student must do a series of projects such as: 1) design and fabricate a functional code control unit with a control panel; 2) properly install and make operational a complex instrument such as a gas chromatograph; 3) analyse an actual control loop by duplication of its time base on the electronic process simulator; 4) interphase a humidity measuring device to a PDP8 computer.

INST304 Telemetering

INST309A Laboratory

INST309B Laboratory

INST399 Technical Report

INV111 Purchasing and Inventory Control

Establish need; maintain adequate purchase order system; maintain secure stockroom; develop and maintain adequate stock control maximum and minimum; establish usage records for comparative purposes; evaluate and compare types of competitive products; negotiate service and supplies contracts.

JWL160 Introduction to Jewellery

Polishing; hard soldering; finishing and polishing of precious metals; elementary jewellery repairs; cuttlefish casting; centrifugal casting; models for production methods, etc. (110 Hrs.)

JWL161 Goldsmithing I

Follows JWL 160 to work in gold, plus the use of tools and equipment; basic techniques of cutting, filing and finishing of non-precious jewellery.

JWL162 Gemsetting I

Follows JWL 160 to work in gem-setting. Introduction to setting, manufacture of bezels and claw settings.

JWL163 Engraving I

Follows JWL 160 and DES 169 to work in engraving — engraving of simple lines — straight and curved for preparation of ornamental designs.

JWL163D Casting

Engraving for the beginner transferring design to metal and engraving using simplified techniques.

JWL164 Silversmithing I

Follows JWL 160 to work in silversmithing. Basic techniques of forming, foming, fitting and soldering.

JWL165 Theory of Specialty

Theory related to:
JWL 161 — Goldsmithing I — cutting, filing, etc.
JWL 162 — Gem-setting I — claws, bezel, etc.
JWL 163 — Engraving I — shapes, theory of design
JWL 164 — Silversmithing I — forming, fitting, etc.

JWL171 Goldsmithing II

Practical aspect of speciality. Basic techniques of hand made jewellery including cuttlefish casting, hard soldering, wire bending and fitting work.

JWL172 Gemsetting II

Practical application of speciality. Basic techniques of gem-setting, manufacturing bezels and claw-settings.

JWL173 Engraving II

Practical application of specialty. Continuation of JWL 163 — engraving of straight and curved lines.

JWL174 Silversmithing II

Practical application of specialty. Continuation of JWL 164 — basic techniques — improving finishes.

JWL175 Theory of Specialty

Theory related to:
JWL 171 — Goldsmithing II — casting, wire-bending, etc.
JWL 172 — Gemsetting II — claw settings, etc.
JWL 173 — Engraving II — basic design theory
JWL 184 — Silversmithing II — finishes, soldering, etc.

JWL265 Theory of Specialty

Theory related to:
JWL 261 — Goldsmithing III — centrifugal casting, etc.
JWL 262 — Gem-setting III — plates, stone sizes, etc.
JWL 263 — Engraving III — history of letter styles, etc.
JWL 264 — Silversmithing III — doning, etc.

JWL271 Goldsmithing IV

Practical application of speciality; plating and

etching techniques, making of own alloys according to percentage content of silver, copper and gold.

JWL272 Gemsetting IV

Practical application of speciality; techniques of bead, claw and bezel setting in various metals and styles.

JWL273 Engraving IV

Practical application of speciality; advanced techniques of block, script and Old English letters in various metals.

JWL274 Silversmithing IV

Practical application of speciality; Holloware tableware, using techniques of raising, forging fitting, plenishing, etc.

JWL275 Theory of Specialty

Theory related to practical application of speciality. JWL 271 — Goldsmithing IV — alloys, etc.
JWL 272 — Gemsetting IV — settings, etc.
JWL 273 — Engraving IV — script and letters
JWL 274 — Silversmithing IV — holloware, forging, etc.

JWL361 Goldsmithing V

Practical application of speciality — advanced techniques of etching, niello, inlay and fire building, etc. For experienced goldsmiths only.

JWL362 Gemsetting V

Practical application of speciality. Advanced techniques of coloured stone and diamond setting and different setting techniques.

JWL363 Engraving V

Practical application of speciality. Advanced engraving on domed and curved surfaces as bowls, pots, trays; includes machine engraving.

JWL364 Silversmithing V

Practical application of speciality. Advanced techniques of raising, plenishing, soldering, assembly of precious holloware.

JWL365 Theory of Specialty

Theory related to:
JWL 361 — Goldsmithing V — niello, inlay, etc.
JWL 362 — Gem-setting V — stone work, diamond settings, etc.
JWL 363 — Engraving V — domes and curves
JWL 364 — Silversmithing V — plenishing, soldering, etc.

JWL371 Goldsmithing VI

Practical application of speciality. Technique of granulation, inlay, etc. for preparation of final projects.

JWL372 Gemsetting VI

Practical application of speciality. Continuation of Semester V including chanel and gypsy settings for final course projects.

JWL373 Engraving VI

Engraving VI — practical application of speciality. Continuing from Semester V in preparation for final course projects.

JWL374 Silversmithing VI

Practical application of speciality; continuation of JWL 364 in preparation for final course projects.

JWL375 Theory of Specialty

Theory related to:
JWL 371 — Goldsmithing VI — granulation, inlays, etc.
JWL 372 — Gemsetting VI — gypsie and other settings
JWL 373 — Engraving VI — unusual engraving
JWL 374 — Silversmithing VI — plenishing, soldering, etc.

JWL436 Shop General Jewellery

General workshop for repair specialist students. Working on ring sizing, shortening and lengthening of bracelets, chain repairs, etc.

JWL446 Shop

General workshop for repair specialist students. Work on jewellery alteration as new ring shanks and bezels, retipping, etc.

JWL465 Theory Repairs

Theory of repairs for JWL 436 — ring sizing, etc.

JWL466 Shop

General workshop for repair specialist students.

JWL466B Shop

General workshop for repair specialist students — for jewellery students from industry.

JWL475 Theory Repairs

Theory of repairs for JWL 446 — bezels, stopping, etc.

JWL476 Jewellery Repairs

Jewellery repairs — commercial — techniques for volume work.

JWL476B Jewellery Repairs

For jewellery graduates with little industrial experience. Semester 2.

LAB100 Dental Laboratory and Lecture

Course content for courses, LAB 100, LAB 200, and LAB 300. This series of lectures and laboratory exercises is presented to Dental Technology students in Semester 1 through 6. The purpose of these courses is to introduce and familiarize the student with the technology required for the fabrication of the various appliances utilized by the dental profession. Course work in Semester 1, 2 and 3 covers complete dentures, resin and cast, partial dentures and an introduction to bridge work. Precision attachments, ceramics and orthodontic appliances are dealt with in Semester 4, 5, and 6. The program is designed in module units and students proceed on individual learning systems. Field study is incorporated as a formal part of the program.

LAB101 Dental Laboratory & Lecture

Course content for courses LAB 101, LAB 201. This series of lectures and laboratory exercises is presented to denture therapy students in Semester 1, 2, and 3. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized in denture therapy. Course work in Semesters 1, 2, and 3 covers complete denture and resin and cast partial dentures.

LAB200 Dental Laboratory and Lecture

Course content for courses, LAB 100, LAB 200, LAB 300.
This series of lectures and laboratory exercises is presented to Dental Technology students in Semester I through 6. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized by the dental profession. Course work in Semester 1, 2, and 3 covers complete dentures, resin and cast, partial dentures, and an introduction to bridge work. Precision attachments, ceramics and orthodontic appliances are dealt with in Semester 4, 5, and 6. The program is designed in module units and students proceed on

individual learning systems. Field study is incorporated as a formal part of the program.

LAB201 Dental Laboratory & Lecture

Course content for courses LAB 101, LAB 201. This series of lectures and laboratory exercises is presented to denture therapy students in Semesters 1, 2, and 3. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized in denture therapy. Course work in Semester 1, 2, and 3 covers complete denture and resin and cast partial dentures.

LAB300 Dental Laboratory and Lecture

Course content for courses LAB 100, LAB 200, LAB 300.
This series of lectures and laboratory exercises is presented to Dental Technology students in Semesters 1 through 6. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized by the dental profession. Course work in Semesters 1, 2, and 3 covers complete dentures, resin and cast, partial denture and an introduction to bridge work. Precision attachments, ceramics and orthodontic appliances are dealt with in Semesters 4, 5, and 6. The program is designed in module units and students proceed on individual learning systems. Field study is incorporated as a formal part of the program.

LAB301 Field Work

During the final semester students in Dental Technology are assigned to specific field work situations. These assignments are designed in practicum form and are under the direct supervision of the college. (102 Hrs.)

LAW100 Law & Insurance

A layman's knowledge of federal, provincial and municipal laws affecting the food industry and related insurance requirements; Public Health Act, Innkeepers Act, Fire Safety Act, Workmen's Compensation Act, Employment Standards Act; Public Liability Adjustors, Appraisals, Bonding, Costs and Coverage.

LAW111 Law

Interpret and apply Condominium Act documents; interpret and apply Landlord Tenant Act pertaining to residential hous must be able to comply with Health Stand Act; interpret and apply pertinent sections municipal, provincial and federal legislati recognize when to acquire legal help; qual legality of Tenancy Agreements; admini covenants of Tenancy Agreement; insti recourse in event of breach of covenant.

LAW200 Business Law I

This two semester commercial Law course designed primarily for accounting majors wh are planning on enrolling in one of the profe sional accounting associations (RIA or CGA However, other students will find one or t semesters of this course useful in their bu ness careers.

Topics covered include Corporation Law, Re Property Law, Tax Legislation, Contracts, L bour Law, and Consumer Legislation.

LAW201 Business Law II

This two semester commercial Law course designed primarily for accounting Majors wh are planning on enrolling in one of the profe sional Accounting Associations (RIA or CGA However, other students will find one or two semesters of this course useful in their bus ness careers.

Topics covered include Corporation Law, Re Property Law, Tax Legislation, Contracts, L bour Law, and Consumer Legislation.

LAW202 Business Law

Practice and procedure before the various courts in Ontario. Rules of court and pleading Rules of evidence, court officials and pro cedures in court offices and registries and other registries. The role of the lawyer with respect to the courts, to other lawyers, and the clients.

LAW203 Business Law

The preparation of a civil or a criminal case

irst. The law library, legal authority and the nalysis of reported cases in such fields as ontract, Tort and Agency, the preparation of egal argument, office practice in such matters s family law, real estate, and briefs before oards and other tribunals.

LAW205 Business Law

LAW206 Hotel Law

LAW207 Food Law

LAW208 Law I Canadian Business Law

anadian Commercial Law, Business Organization, Law of Contract, Labour Laws, Bankuptcy, Torts.

LAW209 Law II Law of Real Estate

Offer to sell and purchase, mortgages, Condominium Act, Land Speculation Tax Act, Ontario Real Estate Law.

LAW211 Law

nterpret and apply Condominium Act and ocuments; interpret and apply Landlord and enant Act pertaining to residential housing; ust be able to comply with Health Standard ct; intrerpret and apply pertinent sections of unicipal, Provincial and Federal legislation; ecognize when to acquire legal help; qualify egality of tenancy agreements; administer ovenants of tenancy agreement; institute reourse in event of Breach of Covenant.

LTH203 Leather & Suede Types

ecognition of various types, cuts, finishes.

LTH204 Leather Manufacturing Techniques

Advanced practice in cutting and sewing leather coats with and without fur trims.

LTH251 Leather Garments — Marketing

Marketing — how to promote sale of leather garments — market studies — mark-ups.

LTH253 Leather Types

Additional practice recognizing various types, finishes, simulated immitations, etc.

LTH254 Leather Manufacturing Techniques

Usual ways of cutting and sewing leather garments — custom work and finishing

MACH110 Workshop Technology

Measuring tools and benchwork. Theory and operation of the following machines: drill press, bandsaw, lathe, vertical and horizontal mills, surface and cylindrical grinders. Practical heat treat operations, practical projects involve the construction of tools, jigs, fixtures and machines.

MACH120 Toolmaking

Layout procedures, fitting, fastener application, part planning, jig and fixture parts. Milling, welding, grinding and assembly fixtures, drill jigs. Gauges: plug and ring gauges, gap gauges, special gauges. Basic diemaking: die parts and functions, types of press tools, die clearance.

MACH126 Machine Shop

Theory and practical assignment in benchwork, drilling, bandsaw, lathe and milling machine. Exercises using this equipment includes: knurling and thread cutting, use of right-and left-hand tools, cut-off tools and

boring bars. Machine tool sharpening is taken. Projects in this course include centre and pin punches, with the major one being a machined eccentric cam locking prosthetic vise.

MACH204 Diemaking

Punch press theory and operation, press brake theory and operation. Theory development, construction and operation bending, blank, forming, compound, progressive, draw, shaving, lancing, coining and embossing. Cold forming, bulging, swaging, broaching, assembly, sub-press, extruding, curling, side cam, horn, moulds — types, construction, operation and manufacture.

MAIN111 Maintenance

Read architectural floor plans and identify pertinent terms and symbols; identify major mechanical and electrical services and locations; demonstrate knowlege of operating principles of major services, water shut-off, breaker panels, circulation pumps, sewer cleanouts, fire lines; maintain a program of sidewalks, driveways and parking areas repair and maintenance; maintain program of exterior building maintenance; evaluate requests for maintenance service; identify emergencies within company policy; recognize minor malfunctions of domestic appliances; establish control procedures for corrective maintenance; institute a maintenance program for outdoor areas, fences, fountains, patios, etc.; maintain record of warrantees; establish and maintain suite maintenance records; establish and maintain building maintenance records; establish and maintain a program of soil, plant and lawn care; schedule suite renovations (occupied suites); establish follow-up procedures on corrective maintenance; establish charge-back system for residents' abuse; schedule suite maintenance on turnover; establish control procedures for preventative maintenance; schedule and implement preventative maintenance programs; administer service contracts common to industry; and establish approved list of contractors emergency service.

MARK100 Introduction to Marketing

An introductory course in modern marketing philosophy and functions. Topics include consumer and industrial market segmentation (identification, needs, market size, trends). Interrelationships between customer, company goals, environmental factors and the marketing mix (product, price, distribution and promotion); and marketing research.

MARK101 The Sales Aspect of Marketing

Your ability to make a personal presentation of yourself, of your ideas, and of your product or service is a valuable aid in all your business contacts.

This ability is enhanced through an understanding of sales planning and sales techniques. Course content includes sales planning and techniques; sales force management and development; recruiting and training. Case studies and videotape assistance in developing these skills.

MARK102 Advertising and Sales Promotion

Designed to relate advertising and sales promotional techniques to the marketing environment. Includes target market definition; attitudes, opinions and beliefs; product analysis; analysis of communications, media and sales promotion leading to written objectives, strategies and media execution; socioeconomic aspects; The organizations of advertising.

MARK103 Introduction to Marketing Management

Principles of marketing, terminology, marketing concept, nature of the consumer markets in Canada, marketing mis.: product, price, distribution, promotion, identify marketing problems, objectives and strategies.

MARK104 Salesmanship

Sales plannning and sales techniques, sales force management and development, personal presentation of ideas, products.

MARK105 Marketing I

Provides the necessary skills to initiate and evaluate sales and marketing programs within company philosophies. Identifies guest needs and the methods by which hospitality services and products can satisy them. Develops incentive programs, pricing policies and quotas for in-house and external selling programs. Develops initiative to exploit facilities and confidence to combat competition.

MARK200 Product Planning and Pricing Policies

A study of the strategies leading to new product marketing decisions including product planning and development, product strategies, as well as branding, packaging and labelling.

It also includes customer and company considerations in determining product pricing for greater profits.

MARK201 Distribution Channels

This course concentrates on the operations, policies and marketing management of wholesaling middlemen and retailers with particular emphasis on retailers. It then shifts emphasis to consider the channel as a sales system from manufacturer to end user, to identify conflicts and maximize efficiency.

MARK202 Marketing Research and Information

Designed for the user of information rather than for the technical research specialist, the course emphasizes the definition of decision-oriented information needs and the interpretation of information results. Sampling and measurement techniques are included. Text, cases, computer simulation, project.

MARK204 Public Relations

This course defines and explains the role of P.R. for the firm. Topics include the preparation of news releases for all media; the running of press conferences; The development of effective campaigns to stress various aspects of products, individuals and the corporate image; and the handling of all aspects of external communication by the firm, other than paid commercial messages.

MARK205 Marketing Management I

This course, with MARK206, interrelates elements of the marketing mix that were studied separately in previous courses, by comparing various strategies, their underlying causes, and relating these to product and price. Text, cases, computer simulation, project.

MARK206 Marketing Management II

This course provides an intensive survey of management decisions related to marketing planning and strategy, buyer behaviour, distribution and promotional strategies. The study of realistic company cases will provide the student with a deeper understanding of business problems in these areas.

MARK207 Marketing Management III

An interrelated and financial overview of the marketing management function. Emphasis is on the analysis and application of quantitative factors affecting marketing productivity.

MARK211 Advertising & Sales Promotion

MARK212 Advertising and Sales Promotion

MARK213 Marketing II

Provides student with ability to develop an advertising and sales program, evaluates and initiates budget and objectives for advertising and sales promotions. Identifies the various media used for advertising and develops skills of writing copy, designing advertising layouts. Shows how to write brochures, plan direct mail campaigns, conduct sign programs and organize promotional activities

MARK214 Marketing III

An understanding of a public relations policy to bring about a desired image; rapport with media, public relations programs for special groups, employees, local community, government, industry, customers and general public; publicity opportunities, news releases, press conferences.

MATH100 Mathematics

Metric and English measurement, linear equations, quadratic equations, logarithms, trigonometry, oblique triangle, compounded and multiple angles, sum and product of angles, triangles, circles, functional concepts and notations, introduction to series, analytical geometry, differential calculus.

MATH100T Mathematics

Metric and English measurement, linear equations, quadratic equations, logarithms, trigonometry, oblique triangle, compounded and multipe angles, sum and product of angles, triangles, circles, functional concepts and notations, introduction to series, analytical geometry, differential calculus.

MATH101 Mathematics

Review of basic algebra: Significant figures; standard notation; slide rule: graphs; linear equations: ratio and proportion; quadratic equations; simultaneous equations; topology of elementary networks; radian measure; trigonometry.

MATH101T Mathematics

MATH102T Mathematics

Review algebra; functions and graphs; factoring and fractions; quadratic equations; binomial theorem; solution to linear equations; and systems of equations; review of trigonometric functions; J-Operator; vectors and triangles.

MATH104 Mathematics

During this course, the student will gain exposure to computation: accuracy and precision, significant digits and mathematical tables. Also covered are fundamental laws of algebra; trigonometry sine law, cosine law and vectors; application. Linear simultaneous equations combined with functions and graphs are also offered in the course of study. (32 Hrs.)

MATH105 Mathematics

Slide rule, calculators; practical measurements; practical geometry; ratio and proportions; graphs and nomograms; point system; arithmetic for the printing trades.

MATH106 Mathematics

MATH107 Mathematics

The objective of this course is to provide the student with a working knowledge of mathematics in order to function in the business world. This course complements the courses in economics and small business management. The course covers basic mathematics, simple interest, discounts, nisms, costing and pricing, taxation, payroll and deductions. (64 Hrs.)

MATH108 Fitness Research Analysis

Computation methods using calculators; basic algebra; linear equations; simultaneous equations; algebraic factoring; quadratic equations; functions and graphs; exponents and radicals; logarithms; metric system of weights, measures, other units and their equivalents; Introduction to computer programmes.

MATH109 Mathematics

MATH110 Business Mathematics

Basic arithmetic processes, interest, trade discounts, food costs, weights and measures;

metric system, ratio and proportion, graphs, recipe quantities, portion costs and selling price calculation, calculation portion sizes and amounts to purchase.

MATH113 Business Mathematics

Discounts: markups, margin, markdowns, interest: present value, discounting negotiable instruments, partial payments. Installment purchases: true interest rate on installment purchases. Methods of computation.

MATH114 Business Mathematics

Fundamental algebraic operations, geometric sequences, logarithms, graphs, interest.

MATH115 Business Mathematics

Annuities, amortization and sinking funds, bonds, depreciation.

MATH120 Applied Computer Programming

Introduction to time sharing; algorithms; elements of basic programming; printing statements; functions and sub-routines; basic statements and rules.

MATH136 Mathematics

Basic arithmetic: mensuration; ratio and proportion; fundamental algebra; geometric figures; fundamental geometric construction; trigonometry; sine and cosine laws; oblique triangles; logarithms; shop calculations,

MATH136A Mathematics

MATH136B Mathematics for Watchmakers

Geometric figures: fundamental geometric construction; trigonometry; sine and cosine laws; oblique triangles; logarithms; shop calculations.

MATH200 Mathematics

Analytical geometry, differential calculus, differentiation, practical applications. Integration, the definite integral, areas under curves, volumes, introduction to differential equations. Practical applications

MATH200T Mathematics

Cartesian co-ordinates, line segments inclination, parallel perpendicular lines, straight line distance from a line to a point, circle parabola ellipse, hyperbola tangents to curves, translation of axis second degree equations, polar coordinates, polar equations inequalities, linear programming.

Limits, slope of a tangent derivative, increasing and decreasing functions, derivative of a polynomial, derivative of a product and quotient, chain rule, implicit functions, derivatives with respect to time, maximum and minimum, the differential indefinite intergral, constant of integration, definite integral, trapesoidal rule for approximate areas, areas under a curve, successive integration, volume of integration, centroids, moments of inertia, differential equations.

MATH201 Mathematics

Review of algebra: functions and graphs; factoring and fractions: quadratic and higher degree equations; binomial theorem; solutions to linear equations and systems of equations; review of trigonometric functions; J-Operator; vectors and triangles.

MATH201T Mathematics

Equations of higher degree; progressions, series and binomial theorem; plane analytic geometry; polar co-ordinates and graphs; limits; slope of tangents; derivative; introduction to differentiation.

MATH202 Mathematics

Trigonometric functions of combined angles; properties and graphs of trigonometric functions; plane analytic geometry; Polar co-ordinates and graphs; limits; slope of tangents; derivative; introduction to differentiation and integration.

MATH203 Mathematics

MATH205 Mathematics

Fundamental algebra; fundamental trigonometry; simple and compound interest; basic bookkeeping; profit and loss sheets; cheques, cash records, and statements; taxation; purchasing; financing; estimating.

MATH206 Mathematics

MATH209 Mathematics

MATH210T Mathematics

Cartesian co-ordinates, line segments inclination, parallel perpendicular lines, straight line distance from a line to a point, circle parabola ellipse, hyperbola tangents to curves, translation of axis second degree equations, polar co-ordinates, polar equations inequalities, linear programming.

Limits, slope of a tangent derivative, increasing and decreasing functions, derivatives of a polynomial, derivatives of a product and quotient, chain rule, implicit functions, derivatives with respect to time, maximum and minimum, the differential indefinite integral, constant of integration, definite integral, trapesoidal rule for approximate areas, areas under a curve, successive integration, volume of integration, centroids, moments of inertia, differential equations.

MATH214 Statistics I

The elements of statistics as applied to business. Treatment of numerical data: graphic representation, the analytic method. Frequency distributions, measures of central tendency and spread. Index numbers, introduction to time.

MATH215 Statistics II

Elementary probability theory, introduction to time series and forecasting. Index numbers and their application.

MATH220 Applied Computer Programming

MATH300 Mathematics

Differential calculus: Functional notation, gradients, limiting value, differentiation from first principles, maxima and minima, differentiation of products and quotients of trigonometric functions with application to angular velocity and acceleration, simple harmonic motion, and electrical problems. Integral calculus: relationship between differentiation and integration the definite integral. Application of calculus to problems encountered in related technology.

MATH300T Mathematics-Statistics

Elements of statistics, variables and graphs frequency distribution, measurements of central tendency, standard deviation and other measures of dispersion, moments, skewness and normal curve, elementary probability theory, chi-square test, curve fitting and method of least squares, analysis of measurement, nature of samples, sampling distribution, making estimates from samples, application to survey data.

MATH301 Mathematics

MATH301T Mathematics (Matrices)

Indefinite integral; power rule; movement of constants and transforms; definite integral; change of limits; areas under curves; general power formula; basic logarithmic form; basic trigonometric form; hyperbolic form; inverse hyperbolic form; standard form tables for integration; integration by parts; by change of independent variable, by partial fractions; by successive reduction, by substitution, by practical methods, Functions of more than one variable; derivative of a function of more than one variable; total differentiation of a function; multiple integrals; MacLaurin series; Taylor's series; operations with series; computations by expansions; L'Hospital's rule; Cauchy's integral test; alternating series; power series.

MATH400 Mathematics

Differentiation of exponential and logarithmic functions with applications related to electrical problems; standard methods of integration, such as substitution, trigonometric identities, partial fractions and integration by parts; radius of curvature, lengths of curves; expansion series; Taylor's and MacLaurin's theorem; differential equations; simple differentiation equations of the first and second order: use of complex numbers in electrical or electronic technology.

MATH406 Mathematics

Consideration of mathematics as applying to basic optics and sensitometry.

MATN401 Maternity Nursing-Practical

This course offers a practical opportunity to apply knowledge, skill and attitudes learned in MATN402 in the nursing care of Maternity Patients. (90 Hours)

MATN402 Maternity Nursing-Theory

MECH100 Mechanics

Statics: concurrent co-planer force systems, resultant forces, equilibrium forces, structural forces, centres of gravity and centroids, moments of inertia, work, energy, and power.

Machines: velocity, acceleration, displacement, laws of motion, Galileo's equations, inertia force, angular motion, work, energy, power, impact.

MECH104 Mechanics

The content of this course will familiarize the student with the following: dynamics, forces and basic principles of mechanics with characteristics and units of force, moments of force are discussed and specific problems in orthotics eg. traction mechanisms and reaction calculation of forces in members of orthotic devices are dealt with in detail. The concluding lectures of the course deal with centroids, with emphasis on the centroid of the human body and its segments.

MECH110 Mechanics of Materials

Semester I — Statics review: forces in structures, stress and deformation, stress and strain. Yong's modulus of elasticity. Riveted and welded joints, torsion.

Semester II — Centroids, moment of inertia. Beams, stresses in beams, deflection of simple beams, thick and thin wall cylinders, combined stresses. Point and distributed loadings, columns.

MECH114 Strength of Materials

This course complements the course MECH100 lectured in the first year. Discussion of mechanics specifically of materials used in O/P fabrication, covering torque and linear stresses in such devices exerted by the human musculature are fully dealt with. (32 Hrs.)

MECH115 Mechanics of Fluids

Properties of fluids: capillarity, viscosity, surface tension, etc. Hydrostatic force and pressure. Centre of pressure, buoyancy and flotation.

Fundamentals of fluid flow — Benoulli's theorem, continuity, orifices, nozzles and weirs. Fluid flow in pipes — Moody chart. Fundamental principles of hydrodynamics. Pumps: types and characteristics. Dimensional analysis.

MECH202 Mechanisms

Techniques of mechanism analysis; graphic analysis of motions; friction and lubrication; lever, pulleys, gears and gear trains, couplings, bearings, clutches, cams, linkages, governors, and speed controls; basic design of mechanisms.

MECH210 Mechanics of Materials

Shear forces, binding moments in beams, cantilevers and continuous beams, reinforced concrete design, structural steel design use of tables.

Selection of sections beams, stanchions, columns, plate girders, riveted, bolted and welded connections, steel roof truss design, joint details.

MECH302 Mechanics & Mechanisms

MECH302T Mechanic and Mechanisms

Properties of materials; stress, strain, and elastic constants; moments of inertia; bending moments; torsion; beam stresses and deflection; Euler strut; column and strut stability; fatigue and fatigue testing; analysis of mechanisms, vibration analysis.

MED100 Oral Medicine

This course is intended to provide general medical information to the hygienist dealing with the public. Students will be familiarized with the etiology and prevention of infectious diseases. Allergy and immune reactions, diseases of the cardiovascular system, blood, lymph and salivary glands. (32 Hrs.)

MET100 Metallurgy

Atomic theory of metals: metallic states, grain formation and growth, metal deformation, mechanical properties, heat treatment of metals, iron-carbon equilibrium diagram, types, properties and uses of cast iron, steel and non-ferrous, aluminum, nickel, copper, magnesium, lead and its alloys.

MET130 Metallurgy 1

An introduction to the base metals common used in the watchmaking and jewellery trade. A more complete coverage in the precious or "noble" metals, namely the mining, refining and preparation from the raw ores to the finished metals as used by the craftsmen.

An introduction to the acids and liquids commonly used in cleaning, soldering, etc., In each of these affiliated trades.

MET130A Metallurgy I

An introduction to the base metals common used in the watchmaking and jewellery trade. A more complete coverage in the precious or "noble" metals, namely the mining, refining and preparation from the raw ores to the finished metals as used by the craftsmen.

An introduction to the acids and liquids commonly used in cleaning, soldering, etc., In each of these affiliated trades.

MET130B Metallurgy II

Continuation of MET130A.

MET166 Metallurgy I

A special module covering the metallurgy of precious metals used in jewellery manufacturing — Basic. (16 hours)

MET176 Metallurgy II

Continuation of MET166 in Semester 2. (16 hrs.) PAT142 Apparel Design 1
PAT243 Fashion — Research

MET200 Metallurgy

This course is lectured in the second year of the Dental Technology program. The metals and alloys used in dentistry are discussed in detail: structure and state metals and metal compounds, physical and mechanical properties of metals, solidification and crystal growth, wrought metals, deformation, recrystallization and grain growth, solid state reaction heat treatment, tarnish and corrosion, gold and its alloys, silver, platinum and copper, base metal alloys and the microscopic structure of alloys. (64 hrs.)

MET266 Metallurgy III

Advanced. Semester III jewellery arts and mature students in Semester V — jewellery repair. (16 hrs.)

MET276 Metallury IV

Continuation of MET266.
Semester IV — Jewellery Arts.
Semester VI — Jewellery Repair. (16 hours)

MSN401 Medical Surgical Nursing-Practical

This course provides a practical opportunity to apply knowledge, skill and attitudes learned in MSN402 in the nursing care of adult patients. (83 HOURS)

MSN402 Medical Surgical Nursing-Theory

A review of basic medical-surgical nursing problems in the categories of trauma, neoplasms, degenerative, developmental, metabolic and psychosocial disturbances. (50 HOURS)

NC126 Numerical Control

Numerical control, definition, history of machine tools, advantages and application of NC axis, absolute and incremental systems, point to point and continuous path systems, programming, tooling, tape preparation, binary systems, machine set-ups. Practical applications of two axis machining.

NC208 Numerical Control

Review basic programming procedures. Computer assisted programming using "Adapt" language and XLO post-processor, lathe programming word address, absolute system, practical assignments.

NEO400 Neonatal Intensive Care-Practice

This course provides clinical practice in the nursing care of sick neonate and his family as a basis for developing skill in giving high quality care. (225 hours)

NEO401 Neonatal Intensive Care-Theory

This course provides a study of the high risk neonate and his family as a basis for developing skill and knowledge in giving high quality nursing care to the sick neonate and his family. (220 hours)

NURS101 Nursing Level I

Experience with patients, related to NURS102.

NURS102 Nursing Level I (Lab-Theory)

This first course in nursing introduces the student to the concepts of health and nursing, and includes the development of nursing skills in assisting individuals with activities of daily living, with a special emphasis on communication.(122 hours)

NURS103 Nursing Level II

Experience with patients, related to NURS104. (178 hours)

NURS104 Nursing Level II (Lab-Theory)

The focus is on identifying obvious signs and symptoms of health deviation, and includes further development of the the nursing process, and introduction of treatment oriented nursing skills. (70 hours)

NURS105 Nursing Level III

Experience with patients, related to NURS106. (280 hours)

NURS106 Nursing Level III (Lab-Theory)

The effects of pathological processes on the adult's ability to care for himself. The related nursing measures are included here with a continued focus on the nursing process, and emphasis on simple nursing situations. (75 hours)

NURS201 Maternity and Newborn Nursing

Experience with patients, related to NURS202. (154 hours)

NURS202 Maternity and Newborn Nursing (Lab-Theory)

The woman in the maternity cycle, the fetus, the newborn, the family are studied in this course, with continued implementation of the nursing process, and introduction of nursing skills specifically related to this area. (40 hours)

NURS203 Medical-Surgical Nursing of Adults

Experience with patients, related to NURS204. (154 hours)

NURS204 Medical-Surgical Nursing Adults (Lab-Theory)

With an emphasis on more complex nursing situations, this course is a continuation of the study of the effects of pathological processes on the adult's ability to care for himself. (40 hours)

NURS205 Medical-Surgical Nursing of Children

Experience with patients, related to NURS206. (154 HOURS)

NURS206 Medical-Surgical Nursing Children Lab-Theory

The nursing of children is the emphasis in this course which focuses on the nursing interventions required in caring for children with deviations from the normal. (40 hours)

NURS207 Psychiatric Nursing

Experience with patients, related to NURS208. (154 hours)

NURS208 Psychiatric Nursing (Lab-Theory)

The focus of this course is on the application of the concepts of mental health, and the principles and concepts of psychiatric nursing. (40 hours)

NURS209 Nursing Level V

Experience with patients, related to NURS210. (245 hours)

NURS210 Nursing Level V (Lab-Theory)

This course is designed to assist the student to consolidate previous learnings, and to apply beginning skills in guiding and directing the care given by other nursing personnel. It serves to facilitate the student's transition from student to graduate nurse role. (15 hours)

NURS400 Long Term Care of the Elderly (Practice)

This runs concurrently with NURS401, provides for active participation in varied clinical settings and field visits to community agencies. Working with various health workers contributes to the nurse teacher's understanding of the needs and responsibilities of Registered Nurses in these settings. Particular skills can be further developed through these opportunities. (80 hours)

NURS401 Long Term Care for the Elderly-Theory

Management of the long term care of the elderly includes application of concepts and principles related to the aging process, skills in leadership as well as in competence of nursing technologies.

Resource persons, audio visual media, group activities are used extensively in this course. (40 hours)

NUT100 Nutrition

Nutritional needs for good health. The "Canada Food Rules". Composition of foods and functions of the five groups of nutrients; vitamins, minerals, proteins, fats, and carbohydrates. The function of roughage and water; digestion and metabolism, modified diets to treat various conditions, variations in caloric content, in texture and consistency, and in nutrient composition.

NUT101 Nutrition-A

This course combines a practical approach to nutrition and its theoretical, scientific basis. Basic principles of the metabolism of carbohydrates, proteins, fats, vitamins and minerals will be presented. The application of information will be stressed through discussions and assessments. Students will assess the nutritional adequacy of their own diets. (17 hours.)

NUT103 Nutrition

This course is to illustrate the various methods of determining calorie expenditure for daily occupational and recreational activities. The interrelationships of enzymes, minerals and vitamins will also be discussed with respect to exercise and proper nutrition.

NUT201 Nutrition Counselling

This course will introduce the students to diet therapy. Certain diseases and disorders such as diabetes, gastro-intestinal problems, obesity, cardiovascular disease, etc., will be discussed along with diet therapy used in these disorders.

NUT202 Nutrition-Biochemistry B

This course builds on previously acquired understanding of the basis of nutrition and its role in dentistry. The concepts of biochemistry are introduced, thus enabling the student to come to a fuller understanding of the implications of the diet. (15 hrs.)

NUT203 Nutrition Counselling "C"

In conjunction with the courses PCT201 and NUT202, students receive instruction in diet analysis, and the art of counselling patients in nutrition. Students have an opportunity to apply these principles in individual, supervised counselling sessions. (17 hrs.)

NUT300 Nutrition and Diet

When designing a restoration, the technician must be aware of the on going consequences of his work. Many dental patients present difficult nutritional problems which require special considerations by the dental technician. (15 hrs.)

NUT301 Nutrition & Diet

This is a lecture-seminar course intended to acquaint the student with the role of nutrition in daily living. The importance of food selection and current nutritional problems in the community and the principles and techniques involved in nutrition education in the community.

Learned concepts will be applied at the clinical level. Patients will be interviewed and students will participate in diet sessions. (30 hours)

OM400 Organization and Management

Concepts and practices are analyzed so that students further develop their abilities to communicate, to interact positively with others and to co-ordinate the team effort.

OM401 Organization and Management

Concepts and practices are analyzed so that students further develop their abilities to communicate, to interact postively with others and to co-ordinate the team effort.

OP100 Typewriting & Office Practice

To develop speed and accuracy with emphasis on proper touch typing techniques; introduction to basic centering, tabulation, business letter styles and preparation of manuscripts and proof reading.

OP101 Typewriting & Office Practice

To further develop speed and accuracy on electric typewriters and, in addition, to complete more advanced theory projects.

OP200 Secretarial Procedures

In addition to further skill development, to familiarize the student with the role of the secretary in business organizations and her duties, including communications, filing, banking and finance, meetings and conferences, travel arrangements, etc.

OP201 Secretarial Practice & Word Processing

In addition to further skill development, to familiarize the student with the role of the secretary in business organizations and her duties, including communications, filing, banking and finance, meetings and conferences, travel arrangement, etc.

OP202 Legal Office Practice

Additional to further development of typing skills, emphasis will be placed on the preparation of legal instruments involving court documents, real estate, divorce papers and partnerships and corporations, as well as receptionist, accounting and secretarial duties involved in running a legal office.

OP203 Legal Office Practice

Prerequisites: A good facility in any shorthand, English at the grade 12 level or equivalent, and 45 w.p.m. in typing.

Additional to further development of typing skills, emphasis will be placed on the preparation of legal instruments involving court documents, real estate, divorce papers and partnerships and corporations, as well as receptionist, accounting and secretarial duties involved in running a legal office.

OP204 Medical Office Practice

To further develop typing skills with emphasis on handling the daily routine of a doctor's office including appointments, correspondence, patient files and medical forms, OHIP and Workmen's Compensation forms, and the assignments involved when part of a hospital dictation typing pool

OP205 Medical Office Practice

To further develop typing skills with emphasis on handling the daily routine of a doctor's office including appointments, correspondence, patient files and medical forms, OHIP and Workmen's Compensation forms, and the assignments involved when part of a hospital dictation typing pool.

ORTH100 Orthodontics

This course is intended to provide the hygienist with the fundamentals of Orthodontics, particularly the recognition of impending dental difficulties including malocclusions, with the objective of providing sufficient information to allow the hygienist to act as a referral agent. (17 hrs.)

ORTH400 Orthodontics

This module is the practical component which expands upon previously learned principles and procedures. The fitting, cementation and removal of orthodontic bands and the placement and removal of arch wires from the base. for instructions. (32 hrs.)

PAED100 Paedodontics

The Dental Hygienist is expected to spend a considerable portion of his/her clinical prac-

-ice with children. This course will present not only the particular aspects of clinical dentistry as it relates to children but also some of the psychological principles involved in delivery of dental care to the paedodontic patient. (17 hours)

PAT141 Apparel Pattern Drafting I

Elementary pattern design (Women's and Children's wear). A systematic method of pattern cutting by drafting directly "On the flat" (i.e. on paper). (1) Drafting the basic foundation pattern in manufacturing sizes to a "Price Line"; (2) Fit and alter patterns. (3) Basic principles of styling; design sketches. (80 hours)

PAT142 Apparel Design I

Styling, line, proportion, research, colour, co-ordinating colour and texture. (32 hours)

PAT144 Fashion Illustration I

Elementary course in fashion art — drawing figures and clothing (still and from life) to show fashion, style design, fabric texture, in preparation for apparel pattern drafting or advertising layouts. (32 hours)

PAT151 Apparel Pattern Drafting

Sequel to PAT141 and 143 — Designing a garment from sketch or original idea and drafting pattern for commercial use - includes creative styling of coats, suits, sportswear, dresswear, advanced styling. (96 hour)

PAT152 Apparel Design II

Styling, research, textiles, copies, size grading up and down. (32 hours)

PAT154 Fashion Illustration II

Commercial applications in fashion art — Creative sketching, line, colour, concepts fashion). (32 hours)

PAT224 Fashion Illustration

Portfolio of suits, coats, some dresses.

PAT231 Pattern Drafting

Special emphasis on fur trims and body lines.

PAT234 Fashion Illustration IV-Layouts

Continuation of PAT 224 for next semester.

PAT241 Pattern Drafting Changes — V

To include style changes and variations of original design; formal wear; theatre/T.V. design introduction. (32 hours)

PAT242 Pattern Markers, Pattern Layout

Duplicator; miniature markers; optimum use of fabric; introduction to computer pattern grading and markers. (48 hours)

PAT243 Fashion - Research

Tracing trends — co-ordination of colour and fabric with design — textures — attitudes. (32 hours)

PAT244 Fashion Illustration III

Specializing in use of fashion illustration in the media — commercials — ads — display cards — backdrops. (32 hours)

PAT251 Pattern Drafting VI

Grading Techniques; computer pattern grading principles; plotting co-ordinates; grading rules for programming. (32 hours)

PAT252 Apparel Design III — Advanced

Advanced principles of line form and design as

applied to the covering of the human figure; draping; European techniques of creating fashions. (48 hours)

PAT254 Fashion Illustration IV-Media

Continuation of applications in the media. (32 hours)

PAT261 Pattern Drafting

Dresses, jackets, bathing suits.

PAT262 Apparel Design

Coats — proportion, colour co-ordination, variations.

PAT271 Pattern Drafting

Additional style variations to PAT 241.

PAT281 Pattern Drafting

Coats — fur trims, leather, etc.

PAT341 Apparel Pattern Drafting VII

Designing and producing a line — Projects and practice designed to develop knack of predicting style change and consumer demand; adjustments needed in design room and on plant floor before showroom display and sales. (64 hours)

PAT542 Apparel Design I-Grading & Cutting

Grading, proportion, research, cutting, colour and texture. (48 hours)

PATH100 Oral Pathology "A"

This course is a study of oral disease and oral manifestations of systemic disease. Emphasis has been placed on the recognition of disease changes so that satisfactory treatment may be instituted. Topics covered include inflammation and repair, benign and malignant changes, infections, developmental disturbances, and periodontal disease. (17 hours)

PATH101 Pathophysiology & Therapeutic Interventions "A"

This course serves as an introduction to the study of disease, and includes an overview of selected disease processes common to the body systems. Selected diseases commonly seen in the clinical setting will be taught in detail. The outline used includes etiology, prevention, incidence, body responses, manifestations, prognosis, and medical therapeutics. There is a major emphasis on Pharmacology as applied to the prevention and treatment of disease. (17 hours)

PATH200 Oral Pathology B

This course complements the course in oral pathology lectured in the first year and includes discussion of developmental disturbances, etiology and course of diseases of the dentition and supporting structures, including those of neoplastic origin. (15 hours)

PATH201 Pathophysiology & Therapeutic Interventions "B"

A continuation of PATH101, this course focuses on some of the more complex diseases affecting adults. (25 hours)

PATH202 Pathophysiology & Therapeutic Interventions "C"

This course relates to PATH101 and PATH201 however the focus is on diseases of children. (25 hours)

PATH203 Oral Pathology "B"

This course complements the course in oral pathology lectured in the first year and includes discussion of developmental disturbances, etiology and course of diseases of the dentition and supporting structures, including those of the neoplastic origin.

PATH205 Psychopathology & Therapeutic Interventions

The focus is on the more prevalent psychiatric disorders of adults, their gross behaviour, disturbances, possible causes, and current forms of therapy. (25 hours)

PATH305 Pathophysiology

This course concentrates on thalidomide, the pathology of muscles; (A) tumors, (B) trauma, (C) torticollisdupuytrens, (D) clubfoot, (E) muscular dystrophy. The pathology of nerves; (A) multiple sclerosis, (B) poliomyelitis, (C) cerebral palsy, (D) spinal cord tumors and trauma, and (E) carpal tunnel syndrome and ganglia.

Pathology and physiology of the circulatory system is lectured covering; (A) idiopathic vascular necrosis of jecur, (B) C.V.A., (C) heart disease. The patho-physiology of the respiratory system also is covered including, (A) chronic bronchitis, (B) asthma, (C) emphysema, (D) pleurisy. To conclude the course, metabolic pathology and diabetes are discussed in detail. The student will have an opportunity to observe autopsies during this course.

PCT101 Pre-Clinical Techniques

Through lectures and practicum experience, the Dental Assistant will become knowledgeable in the clinical functions later to be assumed in professional life. Operating room decorum, instrument identification and four-handed dentistry, materials and procedures, and patient management are the major areas of concentration. (75 hours)

PCT102 Clinical Techniques

In the second semester, in the college clinics and other field placements, the student will apply the Dental Assistant responsibilities learned in the first semester. Field placements include the Faculty of Dentistry, University of Toronto and private dental offices. (170 hours)

PCT200 Pre-Clinical Techniques

During the pre-clinical phase, through lectures and practicum experience, students are taught the principles and procedures involved in obtaining impressions, application of rubber dam, introduction scaling and polishing, the application of anticariogenic agents, and patient management. (40 hours)

PCT201 Pre-Clinical Techniques

During the pre-clinical phase, through lectures and practicum experience, students are taught the principles and procedures involved in oral examination of impressions, application of rubber dam, scaling and polishing, the application of anticariogenic agents, and patient management. (180 hours)

PCT202 Pre-Clinical Techniques

During this period, students provide direct clinical to patients. This experience allows practical training for those principles and techniques learned in the pre-clinical phase. (60 hours)

PCT203 Clinical Techniques

During the second semester and following completion of the Pre-Clinical Program, students in the Dental Hygiene Program will be assigned to supervise clinical sessions at the University of Toronto and the George Brown College Clinics. In their course of instruction, students will provide treatment services to a variety of patients. (204 hours)

PCT401 Pre-Clinical Techniques

In preparation for the modules in restorative pre-clinical techniques, students will review tooth morphology, physiology of occlusion, cavity preparation and classification and the manipulation of restorative materials. Restorative dental procedures and techniques will be taught in individual learning modules. The laboratory sessions comprise a major part of the program. (160 hours)

PCT402 Clinical Techniques

In clinical sessions at the Faculty of Dentistry, University of Toronto, students will participate in rendering clinical services to patients. (160 hours)

PEDN401 Pediatric Nursing-Practical

This course provides a practical opportunity to apply knowledge, skill and attitudes learned in PEDN402 in the nursing care of children.

PEDN402 Pediatric Nursing-Theory

This course develops the knowledge, skill and attitudes necessary to the care of sick children, in the nursing care of children.

PERI100 Periodontics

This course considers the structure and function of the periodontal tissues, the disease processes and predisposing factors which affect these tissues and the various approaches to disease control. (34 hours)

Principles and methodology of periodontal therapy and the role of the preventive Dental Assistant in the area.

PERS211 Personnel Management

PHAR101 Introductory Pharmacology

The classification of drugs, and the effects of drugs upon the body are the major elements of this course. (43 hours)

PHAR102 Pharmacology & Emergency Care

During this program, the student will be familiarized with the principles of pharmacology and drug therapy, particularly as it applies to dentistry. The student will also be exposed to the procedures to be followed in the event of a medical emergency in the clinic environment. Syncope, cardiac irregularities, haemorrh resuscitation and other emergency situati will be discussed. (30 hours)

PHD100 Introduction to Physical Distribution

An introduction to the various compon (business areas) that constitute a full phys distribution system, and the role physical d tribution plays in today's modern business

PHD100X Introduction to Physical Distribution

A survey course dealing with the actual m ment of products from the producer to customer. Areas involved include commun tion, order processing, inventory control, m rial handling, warehouses and warehou location analysis, protective packaging traffic management.

PHD102 Physical Distribution Analysis

Managerial tools of analysis, scientific m ods, cost, volume analysis, probability co cepts, queuing theory, pert system, decis making in production, production planning s controls, and forecasting approaches.

PHD103 Warehousing Management

This course provides an overview of the sponsibilities, functions, techniques and of modern warehousing.

PHD105 Inventory Control I

Inventory goals and current control techniq when and how much to order.

PHD202 Physical Distribution Systems-Management I

This is a fully integrative systems cou dealing with the sub-systems of physical tribution as well as the entire area of phys distribution.

PHD203 Traffic & Transportation Management I

Overview of traffic patterns, (local, domestic and international), traffic impact on population, urbanization, commodities, environment and its economic impact on the city. Modes and communication. Urban transit and its applica- tions factors in Canada. Carriers — trucking operations, historical, rates and tariffs, intermo- dal systems, terminal operations, costing, scheduling, security, computer systems, com- munications, personnel, insurance, fleet main- tenance, customer service, sales, marketing. Consolidation and international trucking oper- ations. Pipelines — development as a mode, economics, cost. Energy resources — coal, gas, oil and their impact on transportation, national and global applications.

PHD204 Industrial Purchasing

The role of purchasing in the modern business organization. Basic purchasing techniques re: supply sources, pricing, negotiation with sup- pliers, quality control, timing cost analysis and control, make or buy decisions, planning, basic policies, organization.

PHD205 Physical Distribution Systems-Management I

This is a senior integrative systems course; it provides the final co-ordination of all compo- nent areas (sub-systems) of physical distribu- tion and of the total physical distribution system with the other areas of an enterprise. Also, major management tools are dealt with intensively and integratively with respect to the physical distribution areas.

PHD206 Inventory Control II

Follows Inventory Control I. Manual and com- puterized production and inventory control systems and decisions.

PHD207 Traffic and Transportation Management II

Shipping — vessels, regulations, laws, customs, documents, commodities, insurance, transport facilities, bulk handling, specialized cargo, containerization, materials handling, and spe- cial reference to marine shipping (St. Lawrence Seaway and Great Lakes of Canada), freight forwarding — Commodities, types, documents, modes.

Rail — freight, tariffs, routing, time manage- ment, inter-modal applications, management communications and passenger freight.

Air Freight — Types of air cargo planes, commodities, routes, cost, maintenance, ware- housing, marketing, rates and documents, haz- ardous materials, packaging and V.I.P.S.

PHY100 Applied Physics

Fluid mechancis; heat and thermometry; heat effects; heat measurement; changes of state; heat transfer thermodynamics; heat engines, refrigeration; sound; nature of light.

PHY100T Applied Physics

Fluids: Properties of fluids, hydrostatics, hydraulics. Heat and thermometry: Tempera- ture scales, types of thermometers, absolute temperature, effects of heat, expansion of solids, liquids and gases, units of heat, specific heat, change of state, heat transfer, gas laws. Sound: Measurement of sound, sonar effects, doppler effect, acoustics. Light: Nature of light, properties of light, optics, lenses, reflection, refraction, wave optics, speed of light, the electromagnetic spectrum, polarization.

PHY102 Applied Physics

PHY105 Physics

Heat, scales and quantities; expansions; spe- cific heat; heat transfer; humidity; specific gravity and density; surface tension; gas laws; osmosis and diffusion; friction and viscosity; elasticity; light; optical instruments; reflection and refraction; photoelectrics; effect of in- frared and ultra violet rays on fading surface and metallic colour; spectrum colours; colour mixing; luminosity and brightness; elec- trostatics and anti-static devices; flash point and safety devices.

PHY106 Applied Physics

PHY121 Physics

Heat and temperature; properties of matter; chemistry of combustion; heat transfer. force, work, power, simple machines, laws of friction, fundamentals of electricity.

PHY200 Modern Physics

The spectrum; atomic physics, Bohr atom line spectra, waves and particles, atomic model, Chroedinger wave equation, solid state physics, crystalline solids, classification by structure; theory of semi-conductors; nuclear physics, relativity, nuclear particles, nuclear energy.

PHY201T Modern Physics

Heat; scales and quantities; expansions; specific heat; heat transfers; mechanical equivalent of heat; propagation of light; illumination and photometry; mirrors and lenses; photoelectrics; dispersion, interference and differation; sound waves; light and colour; infrared and ultra violet rays; Radio waves.

PHY202 Physics (Thermodynamics)

Energy transformations; definition of terms, the PV diagram, laws of thermodynamics; the gas laws, Joule's engine cycles, engine efficiency, heat transfer, entropy; adiabatic, polytropic.

PHY202T Modern Physics

PHYS104 Physiology and Pharmacology

The purpose of the course is to teach a basic theoretical knowledge of the mechanisms of drug action and to discuss the pharmacology and toxicology of psychoactive drugs.

PM110 Precision Measurement

History and basic principles: Basic instrumentation, dial gauges and test indicators, surface plates, micrometers and verniers, gauge blocks, optical instruments and testing, Surface finish screw threads, gears, angle measurement, fixed gauges, air gauging, autometrology, co-ordinate measurement.

PR200

An understanding of a public relations policy to bring about a desired image; rapport with media; public relations programs for special groups, employees, local community, government, industry, customers and general public, publicity opportunities, news releases, press conferences.

PRAC111 Management Practice

Industry Experience — One Week.

PRAC211 Management Practice

Industry Experience — Two Weeks.

PROJ200 Research Project

PROJ205 Co-op Training in Fitness Field

The students will spend a total of 160 hours on a field placement as a fitness instructor.

PROP100 Introduction to Property Management

Course provides an overview of the whole program.

PROP200 Condominium Management

Course will examine in detail the differences between management of rental and condominium accomodation. Students will become familiar with by-laws, declarations and Board of Director functions in a condominium, arrangements, etc.

PROP211 Amenity & Common Area Management

Course will evaluate good management practices and cost control in common areas inside and outside of buildings.

PROS100 Orthotics-Prosthetics Theory

This course lectured in the first year covers the indications and contraindications for use of Symes prostheses, below knee prostheses, patellar tendon bearing orthoses, spinal orthoses and above knee prostheses, alignment and fabrication procedures are fully discussed. Terminology and materials used in making O/P devices are dealt with in details. (32 hours)

PROS101 Materials and Laboratory Techniques

In the first year laboratory, fabrication experience covering all the O/P devices covered in O/P theory are undertaken. Demonstrations of measurements, tracings and castings are given to familiarize the student in this area, and the use of metals, plastics, leathers and fabrics are integral with all projects. Use of machine tools and specific O/P equipment regarding proficiency of operation and safety is on-going throughout the course. (224 hours)

PROS200 Orthotic and Prosthetic Theory

During the third semester the student is further involved with orthotic and prosthetic devices from the point of view of indications and contraindications for use. Other criteria as in PROS100 are fully covered. The devices dealt with are: Ischial weight-bearing, long leg orthoses, silicone Symes prostheses, urethene body jackets, plastic drop foot, orthoses of various types, Milwaukee orthoses, short leg braces (Klenzak). Hip disarticulation and interscapulothoracic prostheses are also discussed. (32 hours)

PROS201 Materials and Lab Techniques

The student continues in this lab course with fabrication of the devices mentioned in PROS200. The course is designed to further develop hand skills. The elective projects allow the student to make full use of time spent in the laboratory. Use of thermoplastic material is particularly emphasized such as vacuum forming. Double vacuum technique in prostheses construction is also an integral part of this course. (208 hours)

PROS203 Field Training

In the third and fourth semesters, students will have the opportunity to visit various private and institutional facilities and observe and participate in the technical aspects of orthotics and prosthetics. The facilities have been carefully selected and a technical course of instructions arranged. The college supervises the course on an on-going basis. (96 hours)

PROS204 Prosthodontics

This course is designed to familiarize the student to the physiological implications of denture prostheses. Considerable emphasis will be placed on prognosis, treatment, planning, and occlusal harmony. (60 hours)

PROS300 Orthotic-Prosthetic Theory

This course is designed for the second year graduate who has been selected to take this optional year. The lectures are clinically oriented, prescription writing and the role of the orthotist and prosthetist on the rehabilitation team plays an important part in its content. The ethical relationship and responsibility of the orthotic prosthetic profession to the public is also discussed. More advanced devices such as myoelectric prostheses and externally powered orthoses are lectured with particular emphasis on patient contact in measurement, casting and fitting. (16 hours)

PROS301 Advanced Lab Techniques

The student during this course will work with patients who act as models for various orthotic

and prosthetic devices. These devices are B/E and A/E prostheses, externally powered reciprocal hand orthoses and the use of newer components used in the O/P industry. Patient fittings with critique will give the student experience in this clinical area. (64 hours)

PROS303 Field Training

This course is designed to allow the maximum clinical exposure for the third year student. Facilities in Toronto and Hamilton are used. The student, under the direction of certified Orthotists and Prosthetists has patient contact in casting, measuring, tracing and fitting of all O/P devices. A close liaison is maintained between the facilities and the college and the course is under the direct supervision of the college. (144 hours)

PROS304 Rehabilitation Medicine

PROS305 Research Project

Each O/P student in the option third year is required to submit, prior to graduation, a thesis researching an elective topic. The topic must have O/P relevance, it will also have practical content. The topics will be selected on an individual basis and every student will designate his or her topic on the last academic day of September of the third year for approval.

The thesis should be approximately 6,000 words in length with a suitable bibliography and should conform to an acceptable standard of presentation, as contained in the booklet, "Outline Guide on Scientific Writing". The research project must be submitted at the end of semesters V & VI for grading. (32 hours)

PSI401 Problem Solving

Students apply the problem solving process to investigate a problem relevant to their practice as operating room nurses.

PSY100 Social Psychology

This course is presented in the first year and is intended to provide the student with an understanding of social institutions and human relationships. It is hoped that through this type didactics, the student will gain a greater insi into his responsibilities during his or h clinical practice. Subjects discussed incl the work ethic, the role of the institution in society, group dynamics, ethnics and citizenship.

PSY101 Psychology

This course provides the students with knowledge of the basic concepts in Psychology which facilitate the understanding of human behaviour. Content will focus on the development of mental processes, attitudes, emotion, motivation, and factors that influence interpersonal relationships. (90 hours)

PSY102 Introductory Psychology

A brief survey course of various branches of Psychology to provide the student with a basic understanding of human behaviour and some skills in applying this knowledge to day to situations.

PSY103 Business Psychology

Formal and informal organizations. Consumer motivation. Consumer analysis depth interviews, attitude and opinion surveys. Theory of Psycho persuasion.

PSY104 Social Psychology

Main topic areas will include emotions, motivation and personality as they relate to interpersonal relationships among individuals.

PSY105 Psychology for Hospitality

A basic understanding of human behaviour and relationships in society; concepts of motivation; values, attitudes and habits; personality and their relationship to job functions; the problems of stress and change; prejudice and discrimination.

PSY161 Introductory Psychology

Concepts and theories of Psychology: Learning, motivation, individual differences, application to practical issues in business and personal life, helping the student to understand himself and others.

PSY162 Advanced Psychology

This course, offered to students who have completed an introductory course in Psychology will examine the basic principles of Social Psychology, such as group dynamics, group behaviour, organizations, etc. These principles will be applied to issues in modern society and industry.

PSY169 Introductory Psychology

Readings and lectures explore some of the findings and developments in the areas of scientific method, perception, learning and motivation, emotion, personality and Social Psychology.

PSY200 Social Psychology

This course is presented in the second year and is intended to provide the student with an understanding of social institutions and human relationships. Subjects discussed include the work ethic, the role of the institution in our society, group dynamics, ethics and human growth and development. (64 hours)

PSY201 Social Psychology

This course is presented in the first year and is intended to provide the student with an understanding of social institutions and human relationships. It is hoped that through this type of practics, the student will gain a greater insight into his responsibilities during his or her clinical practice. Subjects discussed include the work ethic, the role of the institution in our society, group dynamics, ethics and citizenship. (34 hours)

PSY202 Psychology

The structure of this course is to prepare the student to appreciate the needs of amputee and the patient who requires Orthotic management. Its content covers the following: Social Psychology, self-awareness, defense mechanisms. Freudian and Gestalt Psychology is covered. The role of the individual in society as an integrated or frustrated being. The effects of social deviancy related to neuroses and psychoses. In conclusion, personal and group assessments are objectively viewed. (32 hours)

PSY204 Industrial Psychology and Salesmanship

A study of the application of Psychological methods and principles in business and industry, personnel selection, factors involving efficiency. Factors in selling process: buying habits, motives, the pre-approach, the approach, the presentation, the close.

PSY261 Psychopathology of Childhood

Discussions include comparison of normal and abnormal development according to personality theories of Freud and Erikson. Descriptions and functioning of defenses and study of specific categories of disturbance (i.e. Autism, Schizophrenia, etc.)

PSY303 Social and Vocational Rehab

Lectures and visits to clinics will acquaint the student with many aspects of the social and vocational rehabilitation field. Topics include definition of disability and handicap, social roles of the disabled, processes of vocational rehabilitation, functions and types of amputee clinics, network of voluntary welfare agencies — sources of their funds and delivery of health and welfare services, the training role and function of welfare (Social Work), personnel involved in rehabilitation and the administration of funds available to purchase O/P devices. (16 hours)

PSYN401 Psychiatric Nursing-Practical

This course offers a practical opportunity to apply knowledge, skill and attitudes learned in PSYN402 in the nursing care of the psychiatric patient.

PSYN402 Psychiatric Nursing-Theory

The focus of this course is on the application of the concepts of mental health, and the principles and concepts of Psychiatric Nursing. (44 hours)

RBN400 Review of Basics to Nursing

This course examines the health care system in Ontario, the privileges and responsibilities of a Registered Nurse, offers a review of physical, biological and social sciences as well as an introduction to the problem-solving approach to nursing. (72 hours)

REHN400 Rehabilitation Nursing

This is the clinical practice component of the course (Part I). The student is given the opportunity to practice the nursing skills and techniques taught in REHN401. (60 hours)

REHN401 Rehabilitation Nursing-Theory

This course provides Registered Nurses with an opportunity to strengthen their knowledge and understanding related to comprehensive care of the chronically ill and physically disabled person. The rate and scope of nursing in a variety of rehabilitative situations and settings are discussed and/or demonstrated. (60 hours)

REHN403 Rehabilitation Nursing

This is the clinical practice component of the course (Part II). The student will participate with the staff of a clinical agency — observing and practicing the skills she has learned in REHN404. (50 hours)

REHN404 Rehabilitation Nursing — Theory

This course is designed to assist manage and other senior nursing personnel to gain greater knowledge, understanding and skill relation to the care of the chronically-ill disabled persons. A variety of modes of de ery of care will be studied and each studen will, with direction, investigate a chosen pro lem or concern. At the completion of the cours students are expected to be skilled not only the general physical techniques of Rehabili tion Nursing but be able to demonstrate thes skills to others. (40 hours)

REL111 Resident Relations

Uphold company policy; avoid personal re tionship with residents; deal impartially w residents; communicate with residents; able educate owners to their responsibility; mak resident understand terms of tenancy agre ment; advise resident of responsibilities o giving notice; diplomatically deal with less infractions; deal effectively with pets a children; deal with non-acceptables' life style maintain resident discipline; maintain acce able community environment; carry out evi tion procedure; co-ordinate suite turnove complete incoming and outgoing inspectio reports; work within scope of condomini document to protect owners investment; advis Board of Directors of condominiums; tak direction from Board of Directors; liase w Landlord and Tenant Advisory Bureau; media resident-to-resident relations.

REL211 Resident Relations

Uphold company policy; avoid personal rel tionship with residents; deal impartially w residents; communicate with residents; able t educate owners to their responsibility; mak resident understand terms of tenancy agree ment; advise resident of responsibilities o giving notice; diplomatically deal with less infractions; deal effectively with pets a children; deal with non-acceptables' life styles maintain resident discipline; maintain accep able community environment; carry out evi tion procedure; co-ordinate suite turnove complete incoming and outgoing inspectio reports; work within scope of condominium protect owners investment; advise Board Directors of condominiums; take direction fro

Board of Directors; liase with Landlord and Tenant Advisory Bureau; mediate resident-to-resident relations.

RSCH300 Research & Survey-Course Projects

esearch and survey projects, Semester I. (32 ours)

RSCH350 Research and Survey

RSCH351 Research & Survey-Course Projects

esearch and survey projects, Semester II — ith advisor's approval. (32 hours)

AN100 Sanitation and Hygiene

ause and prevention of food-borne illnesses, anitary maintenance of all areas of food ervice establishments. The student is in- ucted in the proper handling of food, sanita- ion through proper dishwashing equipment.

SM132 Small Business Management I

usiness mathematics; basic bookkeeping: ournals, ledgers, financial statements, entries, pecial journals, business organization; busi- ess law; sales and advertising. (64 hours)

SM132B Small Business Management — Watchmakers

usiness mathematics — basic bookkeeping.

SM132C Small Business management — Watchmakers

mall business management for watchmakers.

SM132D Small Business Man. for Jewellry Repairs

SBM142 Small Business Management II

Small business management for jewellers — Semester II. (48 hours)

SBM200 Small Business Management

During this series of lectures, the student will discuss the practical aspects and concerns of running the small business. Emphasis will be placed on problem-solving. Forms of business ownership, contracts, legal agreements, money, sales, custody of property, insurance, taxation, interest and discount will be discussed. A practicum in basic bookkeeping is incorporated into the course. (64 hours)

SEC100 Security

To inform the student on the legal implications of, and the techniques to protect the safety and security of the hospitality operation, its guests and its property. Develops sound identification, surveillance, control, and awareness programs and policies, establishes reporting forms, key control procedures, emergency procedures using available tools and utilizing police and law enforcement agencies.

SEC111 Security and Safety

Includes analysis of the need for security and fire prevention, burglar alarms, smoke detectors and an understanding of the responsibility of the landlord and resident in providing a safe and secure environment for all residents.

SEW141 Sewing Machine Operation — Flatbed, Serger

Prerequisite: instructor's evaluation.

Single-needle lock stitch flat-bed machine. Part 1 of a 240-hour performance objective program (part 2 is SEW 151) leading to speed, stamina and rhythm in sewing on professional machine.

SEW141A Sewing Machine Operation — Flatbed, Serger

Single-needle lock stick flat-bed machine. Part

1 of a 240-hour performance objective program (part 2 is SEW 151) leading to speed, stamina and rhythm in sewing on professional machine.

SEW143 Blind Stitch, Buttonhole and Sewing Machines

Special module as for SEW 142. (32 Hrs.)

SEW241 Apparel Plant Supplies

As DRES 248 for factory supplies, threads, equipment, accessories, justification of purchases. (64 Hrs.)

SEW242 Sewing Machine — Attachments

Special operations using sewing machines — special attachments for specific objectives. (32 Hrs.)

SEW242A Sewing Machine Attachments

SEW244 Special Machines, Cutting, Etc.

Cutting fabric for easiest sewing — markers, layout, notching, ticketing, ironing, etc. (80 Hrs.)

SEW245 Sewing Machines: Methods

Methods and time studies on sewing machine operators. (16 Hrs.)

SEW252 Special Sewing Machines

For special uses — serger, hemming, buttonhole, buttonsew, etc.

SEW252A Special Sewing Machines

Special sewing machine concepts of numerical control applied to sewing machines.

SH100 Shorthand Pitman or Machine

In this semester the theory of the system is thoroughly covered and a good foundation is laid for the development of speed in the following semesters.

SH101 Shorthand Pitman or Machine

This semester is mainly devoted to developing the technique of taking dictation at speeds of up to 100 wpm and transcribing it in mailable form.

SH102 Stenomask & Transcription

SH103 Stenomask & Transcription

SH200 Shorthand

These two semesters continue developing the ability to write shorthand at increasing speeds up to 130 wpm and transcribing the material in mailable form.

SH201 Applied Stenography

These two semesters continue developing the ability to write shorthand at increasing speeds up to 130 wpm and transcribing the material in mailable form.

SH202 Legal Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in a legal office, at an acceptable writing speed.

SH203 Legal Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in a legal office, at an acceptable writing speed.

SH204 Medical Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in the medical profession, at an acceptable writing speed.

SH205 Medical Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in the medical profession, at an acceptable writing speed.

SH402 Shorthand & Transcription Pitman or Machine

SH403 Shorthand & Transcription Pitman or Machine

SOC101 Sociology

This introductory course focuses on basic concepts and methodology of sociology, and their application in various social situations. The social institutions dealt with include the family, religion, education, and the health care system. The student will gain an understanding of the diversity and complexity of some social relationships.

SOC106 Introductory Sociology

A brief survey course to provide the students with a basic understanding of social structure and some skills in applying this knowledge to day care situations.

SOC107 Sociology

A survey of the field of sociology; culture and society, institutions, organizations, ecology and population, disorganization and deviant behaviour, ethnic communities and other aspects of group living.

SOC108 Comparative Sociology

Significant conceptual models in sociology and their application to society will be studied.

SOC171 Introductory Sociology

Readings and discussion of the basic concepts in sociology will be used in analyzing various aspects of Canadian society in intergroup relations, rural and urban communities social classes and social institutions.

SOC201 Interpersonal Relations

This course focuses on assisting the student to develop an increased awareness of 'self' through a study of various normal interactional patterns found in human relationships. As well, a number of deviations from normal behavior patterns will be looked at from a sociological perspective. (45 Hrs.)

SOC202 Living with Dying

This course focuses on assisting the student to look at both her own death and that of others from an emotional as well as an intellectual perspective. Opportunities will be provided for the students to develop their skills in working with dying patients and their families.

SOC203 Family and Kinship

Kinship and family structure in contemporary society is analysed. Focus is in two areas:
- the relationship between economic structure, social class and familial structure.
- the 'politics' of the family, with major themes being the relations between men and women, relations between generations and the internal processes of the family group. (45 Hrs.)

SOC207 Sociology

Sociology of institutions. Special emphasis on the functions of the family as it is understood in various ethnic communities, the changing role of the family. The sociology of deviant behaviour.

SOR401 Safe Practice

Focuses on the legal and organization practices and on the application of principles of physics and asepsis that are essential to provide a safe environment for the patient undergoing surgery.

STR122 Structural Detailing

The preparation of design and detail drawings of standard structural steel reinforced concrete and timer construction.

STR123 Structural Design

Reinforced concrete design; foundations and retaining walls; structural steel design; structural members and frames; detail parts and connections.

STR212 Structural Steel Design and Detailing

Drafting office routines, shop practice, detailing and related design of the components of steel construction.

STR213 Reinforced Concrete Design and Detailing

Drafting office routines, shop practice, detailing and related design of the components of reinforced concrete construction.

STR214 Project Drawing

Project drawing from design sketches; specifications and standards to develop complete sets of design; detail and structural drawings.

SURG300 Orthopedic Surgery — Lecture

This course will give exposure to the student to surgical techniques in amputation and orthopaedic procedures requiring O/P management. The clinic structure and the roles of its professional members will be discussed. Prescription and hopital chart writing will also role, and when possible, visits to hospitals view amputation and other surgery. (16 Hrs.)

SURV100 Survey Computation and Drafting I

Ontario land system, survey calculations, interpretation of legal boundary notes.

SURV100T Survey Computations and Drafting

Introduction to elements of surveying and survey drawing, Ontario land systems, survey calculations and interpretation of legal boundary notes.

SURV101 Plane Surveying

Fundamental principles of surveying and the use of survey instruments and equipment, field procedures for topographical surveying and basic construction layout.

SURV101T Plane Surveying

Fundamental principles of surveying and the use of survey instruments and equipment, the field procedures for topographical surveying and basic construction layout.

SURV102 Quantity Surveying I

Estimating of quantities of materials for simple structures including excavating, concrete, masonry, framing, and finishing materials.

SURV103 Quantity Surveying & Estimating

Method of measurement and preparation of estimates for domestic buildings.

SURV104 Plane Surveying

SURV106 Survey Computation

SURV107 Survey Drafting

SURV110 Surveying

A basic course in the fundamentals of plane surveying, utilizing the various survey instruments and equipment.

SURV200 Survey Computations II

Survey plans and calculations for land exchange, easement, expropriations, route locations and earthwork quantities.

SURV200T Survey Computations and Drafting

Survey plans and calculations for land exchange, easement, expropriations, route locations and earthwork quantities.

SURV201 Advanced Plane Surveying

The field work and equipment required to produce good quality 3rd order control over a large area, using geodetic co-ordinates; the adjustment and computation of the results by regular methods and by computer; the drafting of the final plan.

SURV201T Advanced Plane Surveying

The field work and equipment required to produce a good quality 3rd order, control over a large area using geodetic co-ordinates; the adjustment and computation of the results by regular methods and by computer; the drafting of the final plan.

SURV202 Photogrammetry

Theory and photogrammetric mapping, use of aerial photographs in surveying, mapping procedures.

SURV203 Practical Astronomy

Polaris observation for Meridian, determination by astronomic observation of longitude, time latitude, sun observation, use of tables, calculation procedures.

SURV204 Legal Surveying

History and development of land registration system, methods of registering, legal transfers and general procedures, field trips to registry, land titles, and township offices.

SURV205 Quantity Surveying & Estimating

Advanced method of measurement and preparation of estimates for building works including preparation of estimate and price build-up.

SURV206 Elementary Surveying — Theory

A basic course in the fundamentals of plane surveying, utilizing the various survey instruments and equipment.

SURV207 Elementary Surveying — Legal

Introduction to Ontario land systems. Survey drawing and calculations. Interpretation of legal boundary notes.

SURV208 Advanced Plane Surveying

SURV209 Spherical Trignometry & Astronomy

SURV300T Cartography

The compilation of all survey information for

the preparation of producing the printed map on the various media.

SURV301T Advance Plane Surveying

Special problems encountered in field and equipment pertaining to geodetic and urban control surveys. Utilizing conventional and electro equipment.

SURV302T Photogrammetry

The production of plans and maps using air-photo equipment.

SURV303T Practical Astronomy

Calculating of latitude, time, longitude from stellar, observations, accurate calculation of bearings, transformation and relationship of co-ordinate systems, bearing reference and convergence.

SURV304T Legal Surveying

The various types of official surveys in Ontario under The Survey Act, common law principles pertaining to boundaries and surveys.

TD100 Metrology

Basic instrumentation, dial gauges and test indicators, surface plates, micrometers and verniers, gauge blocks, optical instruments and testing. Surface finish screw threads, gears, angular measurement, fixed guages, air gauging, autometrology, co-ordinate measurement.

THEA100 Acting I

Introduction to the art of acting: self-awareness, expressing the personality, relaxing and sensitivity exercises, improvisation, scene analysis, text adaptations, speech and movement.

THEA101 Acting II

Development of the actor's art: drawing together movement, voice and speech in practical performance exercises.

THEA102 Dance I

Introduction to dance: basic ballet, physical development exercises, body awareness.

THEA103 Movement & Mime

Introduction to movement as communication: improvisation, mime, basic stage gymnastics.

THEA104 Voice & Speech I

Introduction to the art of voice and speech: breath control exercises, word formation, pronunciation, voice projection, voice modulation and expression.

THEA105 Technical Studies I

Video, sound, projection: operation of projectors, tape and record players, camera and video, lights, amplifiers and microphones.

THEA106 Music (vocal)

Introduction to basic music theory, sight reading, pitch, breath control, range development theatre and film.

THEA107 Play & Script Study

Reading and analysis of typical short plays and scripts; appreciation of drama and characterization. Stage and film; commercial use of theatrical arts.

THEA108 Costume

Theory, history and design of costumes; costume cutting and making; sewing, embel-

lishment; wardrobe operation, care and maintenance; materials and fabrics.

THEA109 Make-up

Theory and practise of facial make-up for stage and camera.

THEA110 Set Design & Construction

Theory and practise of design, basic drafting; set construction, carpentry, painting; basic lighting design.

THEA111 Voice & Speech II

Further development of voice quality, projection, modulation and range.

THEA112 Production I

A fully rehearsed production, involving simple set, costumes, props, lighting and other basic production values, to give the students performance exposure before an audience.

THEA113 Music II Vocal

Development of voice, singing techniques and vocal harmony.

THEA114 Technical Studies II

An "internship" setting study of basic elements of production for stage, such as wardrobe, sets, props and lighting; theatre management; stage management.

THEA115 Dance II

Further development of ballet and introduction to modern jazz.

THEA200 Acting III

Concentrated work on developing to an advanced level the principles of acting such as study of text, characterization, interaction, emotional exploration, tempo, ensemble playing.

THEA201 Directing

Theory and practise of directing for stage and camera. Camera and radio microphone.

THEA202 TV Production & Performance

Acting, movement and speech, and dramatic performance production before camera for TV and film, including "internship" experience with a professional producing TV company.

THEA203 Dance III

Continuation of disciplines of Dance I and Dance II and introduction of physical kinetics and tap dancing.

THEA204 Voice & Speech III

Further development of the speaking voice for tone, resonance, increased range, clarity of diction.

THEA205 Radio Technique

An introduction to techniques and basic principles of acting before the radio microphone, theory and practise of radio studio and control booth techniques.

THEA206 Music III Vocal

Further development of the singing voice with emphasis on individual style and solo performance.

THEA207 Professionalism I

Career development and management; casting; resumes and agents; contracts and unions; preparation for auditions.

THEA208 Production II

A fully rehearsed performance with music and dance and basic production elements related to musical comedy before an audience.

THEA209 Professionalism II

THEA210 Voice & Speech II

Further development of the speaking voice, expression of emotion, age, accents and dialects.

THEA211 Music IV Vocal

Further development of solo performance and choral harmony.

THEA212 Dance IV

Emphasis on individual techniques related to the needs of musical theatre.

THEA213 Production III (Performance)

Rehearsal and presentation of a "show-case" stage production in the environment of professional theatre.

THEA214 Production IV (Performance)

Rehearsal and presentation of a stage performance, co-relating the production elements learned during the 2 year program and as a "show-case" for the students completing the second year of their training.

THEA215 Stage Management

Theory and practise of stage management.

THEA216 Performance Production

Practical performance activities in two, [illegible] semester show-case performances.

TYP152 Advanced Typing

TYP200 Lumasonic Typing

An intensive course in keyboard typewriting taught using the lumisonic system; designed to develop quickly a high keyboard typing speed.

The first six hours will be spent learning the keyboard with emphasis on posture, [illegible] stroking, rhythm and correct fingering. Later lessons will develop speed and accuracy to a high degree using modern, programmed instructional techniques. This course is primarily designed as a first step towards a keypunch operators course.

URB100 Urban Studies

Students will learn Planning Act, subdivision control contributing cost to development; municipal liaison; social housing management practices.

WACH126 Balance Work

WACH126B Balance Work

Balance wheels and systems.

WACH127 Hairspring Manipulation

WACH127A Hairspring Manipulation

Hairsprings — how to select, install, adjust, etc. Semester 2.

WACH127B Hairspring Manipulation

Hairsprings — how to use, install, adjust, etc.

WACH128 Filing

WACH128A Filing

Filing skills in fine work. File a stem square with a tolerance of 8 .02mm. Includes all operations.

WACH129 Lathe Operations

WACH129A Lathe Operations

Operating a jeweller's lathe.

WACH129B Lathe Operations

Make a balance staff for a pocket watch in tempered steel to a tolerance of 8 .01mm. Operating a jeweller's lathe.

WACH131 Watchmaking Theory

Care and use of basic tools, screw plate exercises, basic turning exercises, files and filing techniques, turning in brass and steel, making balance staffs. (95 Hrs.)

WACH131A Watchmaking Theory

Care and use of basic tools, screw plate exercises, basic turning exercises, files and filing techniques, turning in brass and steel, making balance staffs. (95 Hrs.)

WACH131B Watchmaking Skills

Grind and polish tempered steel, make clock bushings, repivot wheels, fit broken teeth on clock wheels, refinish mainspring ends and other skills necessary to overhaul clocks.

WACH224 Watch Overhaul

Procedure properly to disassemble, clean, assemble, lubricate and adjust mechanical watches.

WACH225 Escapement Matching

Completely examine and make corrections on the Swiss lever escapement.

WACH227 Balance & Hairspring Manipulation

Calculate, collet, true, vibrate and form a theoretically correct overcoil hairspring for a pocket watch.

WACH227A Balance and Hairspring Manipulation

Advanced instruction to WACH 127B.

WACH227B Balance & Hairspring Manipulation

For a man's wrist watch.

WACH231 Watchmaking Skills

Advanced turning operations, alterations and fitting of parts. Jewelling: bezel type and friction type. Escapement matching, hairspring manipulation, colleting, truing, vibrating and overcoiling of watch hairsprings. (133 Hrs.)

WACH231A Watchmaking Skills

Advanced turning operations, alterations and fitting of parts. Jewelling: bezel type and friction type, escapement matching, hairspring manipulation, colleting, truing, vibrating and overcoiling of watch hairsprings. (133 Hrs.)

WACH231B Watchmaking Skills

Select and replace watch jewels, balance staffs, stems, crowns, mainsprings, hands, crystals, gaskets and other watch parts. He will also learn to burnish balance pivots and train wheel pivots, replace pallet arbors, adjust end shakes, close holes, tighten cannon pinions and other skills necessary to overhaul a mechanical watch.

WACH232 Theory of Watchmaking

Gearing theory and calculations, theory of watch construction, watch timing and adjusting, automatic winding mechanisms, calendar mechanisms, other types of watch escapements, waterproofing. (95 Hrs.)

WACH232A Theory of Watchmaking

Gearing theory and calculations, thoery of watch construction, watch timing and adjusting, automatic winding mechanisms, calendar mechanisms, other types of watch escapements, waterproofing. (95 Hrs.)

WACH232B Theory of Watchmaking

Continuation of WACH 232A.

WACH324 Chronograph Overhaul & Adjustment

Disassemble, clean assemble and adjust the following chronograph mechanisms: chronograph without collum wheel, 30 minute recording; chronograph with collum wheel, 30 minute recording; chronograph with rocking pinion, 30 minute recording; hour recording chronograph of any type; split-second chronograph; automatic winding, hour recording, split-second, day-date chronograph.

WACH330 Horology Theory

Principles of precision adjustments of chronometres, detent escapements, helical balance springs, complete phase calendar mechanisms, perpetual calendar watches. (247 Hrs.)

WACH330B Horology Theory

Theory of construction and principles of operation of chronograph mechanisms described under WACH 324. He will also learn the theory of construction and the principles of operation of electric and electronic watches with balance type, tuning fork and quartz crystal oscillators with analogue type, liquid crystal type and light-emitting diode type display systems.

WACH331 Lathe Operations

General overhauling of perpetual calendar and other types of complicated watches. (57 Hrs.)

WACH331A Lathe Operations

General overhauling techniques, precision watch timing and adjusting, overhauling of perpetual calendar and other types of complicated watches. (57 Hrs.)

WACH331B Lathe Operations

Continuation of WACH 331A.

WACH334 Watch Overhaul & Adjusting - Trouble-shooting

Service and adjust all types of mechanical watches of standard winding and automatic winding systems. The emphasis will be placed on precision adjustments.

WACH334A Watch Overhaul and Adjustment

Overhaul watches, advanced segment.

WACH334B Watch Overhaul

Electronic watch servicing trouble-shoot and completely service the electric and electronic watches described under WACH 330B. He will also learn to use the electronic equipment designed for servicing electronic watches.

WACH335 Applied Electronics

Dichotomy of electronic watches; electron theory, Ohm's law; colour code; series and parallel resistors; batteries; magnetism; electromagnetism; capacitance; I-c circuits; quartz crystals; diodes, transistors; F.E.T.'s liquid crystal circuits as used in watch design; modules and I.C. circuits. (57 Hrs.)

WACH335A Applied Electronics

Dichotomy of electronic watches; electron theory, Ohm's law; colour code; series and parallel resistors; batteries; magnetism; electro magnetism, capacitance; I-c circuits; quartz crystals; diodes, transistors; F.E.T.'s liquid crystal circuits as used in watch design; modules and I.C. circuits. (57 Hrs.)

WACH335B Applied Electronics

Continuation of WACH 335A.

WACH336 Electronic Watch Servicing

Same as WACH 334 but on a more advanced level with finer tolerances required.

WELD100 Shielded Metal Arc & Oxy-acetylene Welding

Further study of manual oxy-acetylene and shielded metal arc welding processes and their application to the welding of sheets, plate, pipe and structural sections. Welding techniques as applied to the welding of pressure vessels and piping as well as consturction welding. Related metallurgy.

WELD101 Gas Tungsten Arc Welding

Description, characteristics, and application of G.T.A. welding and auxiliary equipment and supplies. Preparation procedures and welding techniques as applied to various metals. Joint design, purging procedures, operational difficulties and their solutions.

WELD102 Gas Metal Arc Fluxed Cored & Submerged Arc

Theory and application of semi-automatic and automatic versions of gas metal arc welding — short circuiting, flux-cored and spray arc processes. Theory and application of submerged arc and electroslag welding processes. Study of equipment requirements and selection. Operational trouble-shooting and equipment maintenance. Selection of filler wires and shielding gases. Welding procedures and weld testing.

WELD103 Shop & Laboratory Procedures

Theory of fabrication procedures involving the use of various types of welding and metalworking equipment. Application of manual, semi-automatic and automatic welding processes to production. Theory and industrial application of resistance. Pulsed arc, stud, thermit and atomic hydrogen welding processes. Oxy-fuel gas and plasma arc cutting processes. Process and equipment selection. Quality control and codes, estimating. Shop and production planning. Use of weld inspection equipment to perform destructive and non-destructive tests. Supervision.

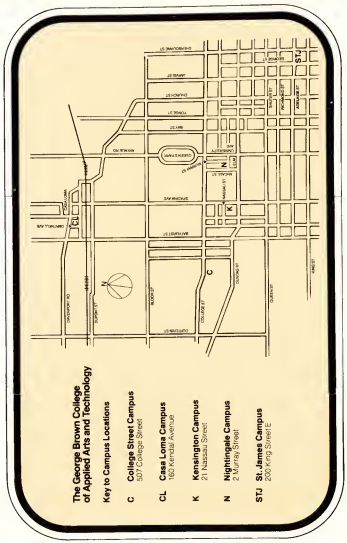
WELD147 Welding Techniques

Safety precautions, handling and using oxy-acetylene equipment, welding terminology, assembly and disassembly of equipment, flame adjustment, definitions of various oxy-acetylene processes, basic weld joints, fusion welding of various metals, theory of oxy-acetylene cutting, brazing and braze welding, soldering methods: equipment and materials, general procedures, torch soldering, soldering with copper and electric soldering irons and guns.

WELD149 Welding Brazing & Cutting

Theory: safety precautions, terminology, assembly and disassembly of equipment, care of equipment, types of flames and their uses, joint design, weld faults, repair of casting, handling of oxygen and acetylene. Testing of welds and operators. Practice: Fusion welding and braze welding. Cutting with manual and semi-automatic equipment.

WELD618 Welding



The George Brown College
of Applied Arts and Technology
P.O. Box 1015, Station B, Toronto, Ontario, M5T 2T9 (416) 967-1212

The George Brown College

Post-Secondary Programs

1978-1979

Sec. of Tech's
Dept

POST-SECONDARY PROGRAMS

1978-1979

For information, phone 967-1212

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General Information

ADMISSION PROCEDURES

Secondary school students intending to enter the George Brown College are advised to consult, during the fall term, with a guidance counsellor, who will supply information and application forms.

Application forms must be accompanied by ONE of the following documents:

(i) An official transcript of all secondary school marks, showing the necessary credits and grades for admission to the desired program.
OR
(ii) A statement from the secondary school principal stating that the applicant is expected to obtain the necessary credits and grades for admission to the desired program; this statement must be substantiated by an official transcript of marks, when it becomes available.

The general public may obtain information and application forms by writing to the George Brown College, P.O. Box 1015, Station B, Toronto, Ontario, M5T 2T9, or by telephoning 367-1212 and asking for "Information".

MATURE STUDENTS

Persons nineteen years of age or older, who do not have the stated admission qualifications but who appear to possess the capacity and maturity to succeed are eligible to apply. This category is not open to overseas students.

ADMISSION REQUIREMENTS

The basic admission requirement to post-secondary programs is Ontario high school graduation (27 credits) or equivalent; certain programs, however, require personal interviews or Grade 12 standing in specific subjects or demonstration of special talents.

PRIORITY OF ADMISSIONS

Students will be admitted in the following order of preference:

1. Permanent residents of Ontario
2. Permanent residents of other Canadian provinces
3. Overseas students from Commonwealth countries
4. Students from other foreign countries

STUDENTS FROM FOREIGN COUNTRIES

Students other than Canadian citizens and landed immigrants are not eligible for apprenticeship programs or Ontario Manpower Retraining Programs. (Grade 10 or less entry.)

Students from foreign countries are eligible for post-secondary programs, provided they can demonstrate an academic standing equivalent to the Ontario Grade 12, establish proficiency in both spoken and written English, fulfill any selective admission criteria for the program for which application is being made, and obtain permission from the Canadian immigration authorities to remain in the country for the length of the program.

DECISION ON ADMISSIONS

Applications are assessed by a Board of Admissions, which is empowered to accept, defer, or reject any candidate's application for admission to any program. The George Brown College reserves the right to cancel a course, when enrolment is insufficient, or employment opportunities appear inadequate.

***FEES**

(i) **Post-Secondary Programs**

Confirmation fee	**$ 50.00**
First semester	
Balance of tuition fee	$140.00
Laboratory/Equipment fee	15.00
Student activity fee	20.00
	$175.00
Second semester	
Tuition fee	$145.00
Laboratory/Equipment fee	15.00
Student activity fee	15.00
	$175.00

The Confirmation fee of $50, which includes a $10 registration fee, must be paid within three weeks after notice of acceptance to guarantee a place in the program; it is not refundable, but is credited as a portion of the total fees.

The balance of the first semester tuition fee must be paid at the time of registration; the second semester fee must be paid in full before the end of the first semester.

The student activity fee is collected on behalf of the Student Councils.

Detailed information on fees, payment dates, refunds and late fees is available in the Fee Schedule available from the Registrar's Department and issued with every acceptance letter.

Applicants from foreign countries must pay total fees of $825.00 which must be paid in full no later than two months before registration date, i.e. by July 1 for September registration and by November 1 for January registration.

The cost of textbooks, instruments and supplies is additional to the tuition fee and varies according to the program, from $40 to $100. Students are invited to use the facilities of the campus bookstore.

(ii) Ontario Manpower Retraining Programs
Applicants eligible for these programs will pay fees in advance at the rate of $7.50 per week, in instalments covering not less than one month at a time; these fees are not refundable.

Cheques and money orders for fees should be made payable to the George Brown College.

* The above fees were in effect at the time of publication; they are subject to change at any time without notice.

FINANCIAL ASSISTANCE

Applicants for admission to a post-secondary program, who are Canadian citizens or landed immigrants having resided in the country for at least 12 consecutive months prior to enrolment, may be eligible for financial assistance under the terms of the Ontario Student Assistance Program or of the Canada Student Loans Plan.

Further information and application forms for student financial assistance are available at all secondary schools and the Student Services Office of the George Brown College, telephone 967-1212.

SERVICES

- ACCOMMODATION information is available by dialing (416) 967-1212. Although residence accommodation is not provided by the College, there is no shortage of boarding and rooming facilities in Toronto; rates vary from $38 to $40 per week for room and board.
- COUNSELLING SERVICES are available on each campus to provide educational, vocational, and personal counselling.
- HEALTH CENTRES are staffed by Public Health Nurses, with a physician available for consultation on an appointment basis; services include individual health counselling, health education programs and emergency care in the case of accident or illness.
- LIBRARIES providing for study needs and leisure reading, operate on each campus.
- OHIP (Ontario Hospital Insurance Plan) coverage is the responsibility of each student; information is available at each Campus Health Centre.
- PLACEMENT ASSISTANCE is provided to all students by Divisional Faculty and Staff. The Placement Office provides career planning and employment search information and maintains contact with potential employers on behalf of graduates.
Students are advised of permanent, part-time and summer employment opportunities.
- TRANSPORTATION on the GO trains is available at reduced rates for students in full-time attendance for more than 12 consecutive weeks; further information may be obtained by telephoning (416) 248-3112.
- ATHLETIC activities are co-ordinated from the office at the Casa Loma Campus gymnasium. Information about the programs can be obtained by telephoning 967-1212 ext. 431.

Casa Loma

Air Conditioning Technician

GBC Code: AR101

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at, or above the general level, or equivalent.

During the last decade air conditioning has developed into one of Canada's fastest growing industries. By pioneering specialized systems that heat, cool, humidify, circulate, filter and purify, it has contributed to achievements ranging from space travel to solar heating.

The student will gain a very broad and intensive knowledge of the design, installation and operation of air conditioning systems in residential, commercial and industrial buildings. Well equipped laboratories are provided to reinforce the practical aspects of the subject matter.

Graduates have the academic qualification for certification at the Senior Engineering Technician level by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
AIR	100	Refrigeration	150.0
AIR	105	Air Conditioning	105.0
AIR	108	Instrumentation	30.0
AIR	109	Electrical Fundamentals	45.0
ARDR	124	Drafting	30.0
MATH	106	Mathematics	45.0
PHY	106	Applied Physics	30.0
WELD	149	Welding Brazing & Cutting	30.0
			465.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
AIR	105	Air Conditioning	119.0
AIR	109	Electrical Fundamentals	51.0
ARDR	124	Drafting	34.0
MATH	106	Mathematics	51.0
PHY	106	Applied Physics	34.0
HT	104	Heating	136.0
AIR	107	Hydronic Heating	34.0
ENG	100	Language and Communications	68.0
			527.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
HT	114	Heating	75.0
AIR	203	Air Conditioning Systems	135.0
AIR	201	Automatic Controls	45.0
ARDR	232	Drafting	60.0
PHY	202	Physics (Thermodynamics)	30.0
ENG	200	Language and Communications	30.0
MATH	206	Mathematics	45.0
MATH	120	Applied Computer Programming	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
AIR	203	Air Conditioning Systems	153.0
AIR	201	Automatic Controls	51.0
PHY	202	Physics (Thermodynamics)	34.0
MATH	206	Mathematics	51.0
ENG	200	Language and Communications	34.0
AIR	200	Refrigeration	119.0
AIR	106	Estimating for Air Conditioning	68.0
			510.0

Civil Engineering Technician

GBC code: AR110

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Background: Credits in physics, drafting and surveying are desirable.

The two-year Civil Engineering Program prepares the student to seek a career in the design, planning or construction of civil engineering projects.

During the instruction periods, particularly in the technical subjects the instructors use the project approach to reinforce the theoretical and practical aspects of engineering. This method utilizing well-equipped laboratories for the testing and control of the major construction materials helps to familiarize the student with industry's approach to the subject area.

Graduates are eligible for certification in the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
SURV	104	Plane Surveying	90.0
CIV	101	Engineering Drawing and Design	90.0
CIV	103	Construction Materials	45.0
CIV	104	Specification and Estimating	30.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
			420.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
SURV	104	Plane Surveying	102.0
CIV	101	Engineering Drawing and Design	102.0
CIV	103	Construction Materials	51.0
CIV	104	Specification and Estimating	34.0
MATH	100	Mathematics	68,0
ENG	100	Language and Communications	34.0
PHY	100	Applied Physics	85.0
			476.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
CIV	200	Structural Drawing and Design	60.0
CIV	202	Municipal Services	45.0
CIV	203	Highway Technology	75.0
CIV	204	Specifications and Estimating	30.0
SURV	201	Advanced Plane Surveying	90.0
MATH	120	Applied Computer Programming	30.0
MATH	200	Mathematics	60.0
ENG	200	Language and Communications	30.0
MECH	110	Mechanics of Materials	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
CIV	200	Structural Drawing and Design	68.0
CIV	202	Municipal Services	51.0
CIV	203	Highway Technology	85.0
CIV	204	Specifications and Estimating	34.0
SURV	201	Advanced Plane Surveying	102.0
MATH	220	Applied Computer Programming	34.0
MATH	200	Mathematics	68.0
ENG	200	Language and Communications	34.0
MECH	110	Mechanics of Materials	34.0
			510.0

Construction Technician GBC code: AR103

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years 3 and 4 at, or above the general level, or equivalent.

Background: Credits in Physics, Drafting and Bookkeeping would be useful as background.

The two-year Construction Technician Program prepares the student to enter the construction industry in various capacities leading to positions such as estimators, expeditors, field engineers and superintendents, building inspectors, building product sales and others.

Instructors use the project approach to learning to reinforce the theoretical and practical parts of the program. In this way, the student is made familiar with industry's methods of working. Well equipped laboratories are available for the testing and quality control of various construction materials and components.

Graduates are eligible for certification in the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
CO	100	Building Construction	45.0
CO	101	Quantity Surveying I	75.0
CO	102	Mechanical Installations I	45.0
CO	103	Construction Materials	60.0
CO	104	Site Engineering	60.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
			450.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
CO	100	Building Construction	85.0
CO	101	Quantity Surveying I	119.0
CO	102	Mechanical Installations I	51.0
CO	103	Construction Materials	68.0
MATH	100	Mathematics	68.0
ENG	100	Language and Communications	34.0
PHY	100	Applied Physics	85.0
			510.0

Semester 3 — 17 weeks

Course		Course Title	Total Hours
CO	216	Site Engineering	60.0
CO	200	Building Construction	45.0
CO	201	Quantity Surveying II	45.0
CO	202	Mechanical Installations II	60.0
CO	210	Contracts and Specifications	60.0
MATH	200	Mathematics	60.0
ENG	200	Language and Communications	30.0
EC	104	Economics	60.0
MECH	110	Mechanics of Materials	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
CO	200	Building Construction	68.0
CO	201	Quantity Surveying II	85.0
CO	202	Mechanical Installations II	68.0
CO	210	Contracts and Specifications	68.0
MATH	200	Mathematics	68.0
ENG	200	Language and Communications	34.0
EC	104	Economics	68.0
MECH	110	Mechanics of Materials	34.0
			493.0

Drafting Technician Architectural GBC code: AR104

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

The architectural drafting technician is one of a team of technical personnel involved in the construction industry. Graduates of this two-year program play a significant role as detail draftspersons, field supervisors, sales consultants and expeditors in architectural, engineering and fabrication firms, government and municipal offices.

On the job atmosphere is simulated in the classroom by grouping students into teams and using a current building project from industry as a classroom case study. Job site visits of the building under construction, specifications, Ontario Building Code, Mechanical and Electrical drawings and additional information is given to the student for a complete comprehension of the Architectural Technician's responsibilities.

Graduates are eligible for certification in the Association of Architectural Technologists of Ontario.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ARCH	100	Materials and Methods	30.0
ARDR	102	Architectural Drafting I	135.0
ARDR	120	Descriptive Geometry I	30.0
SURV	110	Surveying	45.0
MATH	109	Mathematics	45.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
ARCH	101	Codes and Regulations	15.0
ARDR	103	Architectural Rendering and Presentation	30.0
			435.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
ARCH	100	Materials and Methods	34.0
ARDR	102	Architectural Drafting I	153.0
ARDR	120	Descriptive Geometry I	34.0
MATH	109	Mathematics	51.0
ENG	100	Language and Communications	34.0
EC	100	Economics	68.0
PHY	100	Applied Physics	85.0
ARDR	103	Architectural Rendering and Presentation	34.0
ARCH	101	Codes and Regulations	17.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ARCH	200	Materials and Methods	34.0
ARDR	111	Mechanical Installations Drafting I	51.0
ARDR	202	Architectural Drafting II	126.0
MATH	209	Mathematics	51.0
ENG	200	Language and Communications	34.0
ARDR	104	Architectural Design and Planning	34.0
SURV	102	Quantity Surveying I	68.0
ARDR	115	Structural Drafting	68.0
			466.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ARCH	200	Materials and Methods	34.0
ARDR	111	Mechanical Installations Drafting I	51.0
ARDR	202	Architectural Drafting II	126.0
MATH	209	Mathematics	51.0
ENG	200	Language and Communications	34.0
SURV	102	Quantity Surveying I	68.0
ARDR	115	Structural Drafting	68.0
ARDR	104	Architectural Design and Planning	34.0
			466.0

Drafting Technician GBC code: AR105
General

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

The objective of the program is to prepare the student for employment in one of a variety of drafting fields by teaching the related theory of construction, manufacturing and accepted practice as well as developing drafting skill. Architectural, mechanical services, survey and structural drafting are taught.

The drafting classes are conducted as a drawing office. The theory of the construction is introduced and studied in relation to its application in drawing. Projects are developed from simple basic forms by applying knowledge gained from lecture and demonstration. The student progresses to more complex working drawings combined with continued practice of drawing skill and added knowledge.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ARDR	112	Drafting	120.0
SURV	100	Survey Computation and Drafting I	60.0
ARDR	154	Art and Presentation	30.0
ARCH	100	Materials and Methods	30.0
MATH	109	Mathematics	45.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
ARDR	120	Descriptive Geometry I	30.0
			420.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
SURV	100	Survey Computation and Drafting I	68.0
ARDR	154	Art and Presentation	34.0
ARCH	100	Materials and Methods	34.0
MATH	109	Mathematics	51.0
ENG	100	Language and Communications	34.0
ARDR	102	Architectural Drafting I	170.0
ARDR	120	Descriptive Geometry I	34.0
			425.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ARDR	202	Architectural Drafting II	120.0
MATH	209	Mathematics	45.0
ENG	200	Language and Communications	30.0
ARDR	108	Structural Drafting I	75.0
ARCH	200	Materials and Methods	30.0
STR	123	Structural Design	45.0
ARDR	111	Mechanical Installations Drafting I	45.0
MECH	110	Mechanics of Materials	60.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ARDR	202	Architectural Drafting II	136.0
MATH	209	Mathematics	51.0
ENG	200	Language and Communications	34.0
ARDR	108	Structural Drafting I	85.0
STR	123	Structural Design	51.0
PHY	100	Applied Physics	68.0
ARDR	111	Mechanical Installations Drafting I	51.0
ARCH	200	Materials and Methods	34.0
			510.0

Drafting Technician GBC code: AR107
Mechanical Services

Location: Casa Loma
Length: 4 semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Background: Credits in physics and drafting would be useful as background.

During the past decade or so the importance of mechanical services in the construction industry has increased greatly. It is safe to say that a major portion of construction costs are in the mechanical systems of buildings. These include air conditioning, electrical, heating, plumbing, sheet metal and other systems. More and more, there is a need for skilled personnel to prepare working drawings detailing the various systems as they relate to the overall requirements of a building.

This two-year mechanical services drafting program teaches the student how a modern building operates and how to make preliminary selections of necessary equipment. The graphic layout of all mechanical services is covered thoroughly.

In order to familiarize the student with the various systems and to provide reinforcement in instruction while on course, the student can see many of the services exposed to view in the college, which is designed on the "open" concept. Also, within the college, visits can be made to the various well-equipped trades and service areas which relate to mechanical systems. Field visits to construction sites are made when possible to enable students to observe accepted installation practices.

PROGRAM ROUTE: 1

Semester 1 — 15 Weeks

Course		Course Title	Total Hours
ARDR	106	Architectural Drafting I	60.0
ARDR	107	Mechanical Installation Drafting I	135.0
ARDR	109	Electrical Installation Drafting I	60.0
ARDR	120	Descriptive Geometry I	30.0
MATH	109	Mathematics	45.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	75.0
			435.0

Semester 2 — 17 Weeks

Course		Course Title	Total Hours
ARDR	106	Architectural Drafting I	68.0
ARDR	107	Mechanical Installation Drafting I	153.0
ARDR	109	Electrical Installation Drafting I	68.0
ARDR	120	Descriptive Geometry I	34.0
MATH	109	Mathematics	51.0
ENG	100	Language and Communications	34.0
PHY	100	Applied Physics	85.0
			493.0

Semester 3 — 15 Weeks

Course		Course Title	Total Hours
ARDR	228	Air Conditioning and Refrigeration	150.0
ARDR	229	Heating Systems	60.0
ARDR	230	Plumbing Systems	90.0
MATH	209	Mathematics	45.0
ENG	200	Language and Communications	30.0
MECH	115	Mechanics of Fluids	60.0
			435.0

Semester 4 — 17 Weeks

Course		Course Title	Total Hours
ARDR	228	Air Conditioning and Refrigeration	170.0
ARDR	229	Heating Systems	68.0
ARDR	230	Plumbing Systems	102.0
MATH	209	Mathematics	51.0
ENG	200	Language and Communications	34.0
MECH	110	Mechanics of Materials	68.0
			493.0

Process Piping GBC Code: AR113
Design

Location: Casa Loma
Length: 4 semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level or equivalent.

Background: Credits in drafting and physics would be an asset.

The process piping design technician is generally employed by consulting engineers, public utilities and the petrochemical industry. He or she is a member of the engineering design team responsible for the design, layout, detailed working drawings and installation of automated industrial plants. These include oil refineries, breweries, power generating, water processing and food and drug plants.

The program is conducted in a modern drafting room which simulates an industrial engineering office. The student learns to apply the theoretical and practical aspects of the instruction by working on projects.

Graduates are eligible to apply to the Ontario Association of Cerified Engineering Technicians and Technologists for certification.

PROGRAM ROUTE: 1

Semester 1 — 15 Weeks

Course		Course Title	Total Hours
ENDR	118	Descriptive Geometry	60.0

ENDR	158	Drafting and Design	180.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	30.0
MET	100	Metallurgy	30.0
MACH	110	Workshop Technology	60.0
			450.0

Semester 2 — 17 Weeks

Course		Course Title	Total Hours
ENDR	118	Descriptive Geometry	68.0
ENDR	104	Pipe Drafting and Design	170.0
MATH	100	Mathematics	68.0
ENG	100	Language and Communications	34.0
MECH	100	Mechanics	34.0
MET	110	Metallurgy	34.0
ENDR	115	Structural Drafting	51.0
MACH	110	Workshop Technology	51.0
			510.0

Semester 3 — 15 Weeks

Course		Course Title	Total Hours
ENDR	204	Design and Layout of Piping Systems	150.0
ENDR	222	Descriptive Geometry	60.0
ENDR	225	Materials and Processes	30.0
MECH	115	Mechanics of Fluids	30.0
INST	105	Industrial Process Instrumentation	45.0
CHEM	100	Applied Chemistry	45.0
MATH	200	Mathematics	60.0
ENG	200	Language and Communications	30.0
			450.0

Semester 4 — 17 Weeks

Course		Course Title	Total Hours
ENDR	204	Design and Layout of Piping Systems	170.0
ENDR	222	Descriptive Geometry	68.0
ENDR	225	Materials and Processes	34.0
MECH	115	Mechanics of Fluids	34.0
INST	105	Industrial Process Instrumentation	51.0
CHEM	100	Applied Chemistry	51.0
MATH	200	Mathematics	51.0
ENG	200	Language and Communications	34.0
			493.0

Mechanical Drafting Design Technician GBC code: AR112

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma

Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Background: Credits in drafting and physics are desirable.

This program has been developed to prepare the student for a career in a wide range of drafting and design areas.

The theoretical and practical aspects of the subject matter are applied to the drawing and design of projects in a modern drafting room, using up-to-date equipment which simulates an actual industrial engineering office.

Graduates are eligible for certification by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ENDR	118	Descriptive Geometry	60.0
ENDR	158	Drafting and Design	180.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	45.0
MET	100	Metallurgy	30.0
MACH	110	Workshop Technology	60.0
			465.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
ENDR	102	Machine Drawing and Design	170.0
ENDR	118	Descriptive Geometry	68.0
MATH	100	Mathematics	68.0
ENG	100	Language and Communications	34.0
MECH	100	Mechanics	34.0
MET	100	Metallurgy	34.0
ENDR	107	Kinematics	34.0
MACH	110	Workshop Technology	68.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ENDR	201	Drawing and Product Design	150.0
ENDR	107	Kinematics	30.0
ENDR	222	Descriptive Geometry	60.0
MATH	200	Mathematics	60.0
MECH	110	Mechanics of Materials	30.0
TD	100	Metrology	60.0

ENG	200	Language and Communications	30.0
ENDR	202	Manufacturing Processes	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ENDR	201	Drawing and Product Design	170.0
ENDR	107	Kinematics	34.0
ENDR	222	Descriptive Geometry	68.0
ENDR	305	Machine Circuits and Apparatus	68.0
ENDR	241	Tool Design Theory	34.0
MATH	200	Mathematics	68.0
MECH	110	Mechanics of Materials	34.0
ENG	200	Language and Communications	34.0
			510.0

Survey Technician GBC code: AR102

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Surveying is the science of measuring and recording the geometrical and physical features of our environment.

Young men and women can find challenging careers in this area whether it is doing exploration surveys, laying out new sub-divisions or compiling information and calculations into a finished plan for urban study.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
SURV	106	Survey Computation	75.0
SURV	101	Plane surveying	120.0
MATH	103	Mathematics	75.0
ENG	100	Language and Communications	30.0
SURV	107	Survey Drafting	60.0
GEO	100	Forestry & Geology	45.0
PHY	102	Applied Physics	45.0
			450.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
SURV	106	Survey Computation	85.0
SURV	101	Plane Surveying	136.0
MATH	100	Mathematics	85.0
ENG	100	Language and Communications	34.0
SURV	107	Survey Drafting	68.0
GEO	100	Forestry & Geology	51.0
PHY	102	Applied Physics	51.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
CIV	202	Municipal Services	60.0
SURV	200	Survey Computations II	90.0
SURV	208	Advanced Plane Surveying	120.0
SURV	209	Spherical Trigonometry & Astronomy	30.0
SURV	204	Legal Surveying	30.0
MATH	203	Mathematics	75.0
CIV	106	Land Division	45.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
CIV	202	Municipal Services	68.0
SURV	200	Survey Computations II	102.0
SURV	208	Advanced Plane Surveying	136.0
SURV	209	Spherical Trigonometry & Astronomy	34.0
SURV	204	Legal Surveys	34.0
MATH	203	Mathematics	85.0
CIV	106	Land Division	51.0
			510.0

Survey Technologist GBC code: AR106

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with high standing in mathematics in years three and four at or above the general level.

Background: Credits in physics, drafting and surveying are desirable.

Surveying is the science of measuring and recording the geometrical and physical features of our environment.

Young men and women can find challenging careers in this area whether it is doing exploration surveys, laying out new sub-divisions or compiling information and calculations into a finished plan for urban study.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
SURV	106	Survey Drafting	60.0
SURV	106	Survey Computation	75.0
SURV	101	Plane Surveying	120.0
MATH	101T	Mathematics	75.0

ENG	100	Language and Communications	30.0
GEO	100	Forestry & Geology	45.0
PHY	102	Applied Physics	45.0
			450.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
SURV	107	Survey Drafting	60.0
SURV	106	Survey Computation	75.0
SURV	101	Plane Surveying	120.0
MATH	103	Mathematics	75.0
ENG	100	Language and Communications	30.0
GEO	100	Forestry & Geology	45.0
PHY	102	Applied Physics	45.0
			450.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
SURV	202	Photogrammetry	60.0
MATH	120	Applied Computer Programming	60.0
MATH	204A	Mathematics III Part A	60.0
SURV	210A	Geodetic Surveying Part A	90.0
CIV	205	Drainage Engineering	60.0
			330.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
CIV	106	Land Division	45.0
CIV	202	Municipal Services	60.0
SURV	200	Survey Computations II	90.0
SURV	208	Advanced Plane Surveying	120.0
SURV	209	Spherical Trigonometry & Astronomy	30.0
SURV	204	Legal Surveying	30.0
MATH	203	Mathematics	75.0
			450.0

Semester 5 — 15 weeks

Course		Course Title	Total Hours
CIV	106	Land Division	45.0
CIV	202	Municipal Services	60.0
SURV	200	Survey Computations II	90.0
SURV	208	Advanced Plane Surveying	120.0
SURV	209	Spherical Trigonometry & Astronomy	30.0
SURV	204	Legal Surveys	30.0
MATH	303	Mathematics	75.0
			450.0

Semester 6 — 15 weeks

Course		Course Title	Total Hours
MATH	204B	Mathematics III Part B	60.0
SURV	210B	Geodetic Surveying Part B	90.0
CO	300	Construction Methods & Materials	60.0
ENG	301	Technical Report	60.0
			270.0

Tool & Die Design Technician GBC code: AR111

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics in years three and four at or above the general level, or equivalent.

Background: Credits in drafting and machine shop practice would be advantageous.

The tool and die design technician works in the drawing and design offices of manufacturing companies. The tool designer helps decide the various ways products are to be manufactured, develops the manufacturing sequence and decides what tooling is needed to make each part, and creates the designs for special tools such as jibs, fixtures and dies which play a vital role in modern manufacturing practice.

This two-year program is divided into four semesters which cover the theoretical and practical aspects of tool design. The student will be stationed at one of the design tables in our design office. This practical approach is the same as would be encountered in industry. The well equipped design office and library, give the student a realistic environment in which to develop skills, an up-to-date machine shop is available to test the practicality of designs developed in the design office.

Graduates are eligible for certification by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ENDR	118	Descriptive Geometry	60.0
ENDR	158	Drafting and Design	180.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	30.0
MECH	100	Mechanics	45.0
MET	100	Metallurgy	30.0
MACH	110	Workshop Technology	60.0
			465.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
ENDR	118	Descriptive Geometry	68.0
ENDR	130	Jig and Fixture Design	170.0
MATH	100	Mathematics	68.0
MECH	100	Mechanics	34.0
ENG	100	Language and Communications	34.0
MET	100	Metallurgy	34.0
MACH	110	Workshop Technology	68.0
ENDR	107	Kinematics	34.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ENDR	140	Die Design	150.0
ENDR	107	Kinematics	30.0
	100	Metrology	60.0
MATH	200	Mathematics	60.0
MECH	110	Mechanics of Materials	30.0
ENG	200	Language and Communications	30.0
ENDR	222	Descriptive Geometry	60.0
ENDR	202	Manufacturing Processes	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
ENDR	340	Die Design	170.0
ENDR	241	Tool Design Theory	34.0
ENDR	107	Kinematics	34.0
EL	305	Machine Circuits and Apparatus	68.0
MATH	200	Mathematics	68.0
MECH	110	Mechanics of Materials	34.0
ENG	200	Language and Communications	34.0
ENDR	222	Descriptive Geometry	68.0
			510.0

Piano Technician AR114

Location: Casa Loma
Length: 4 semesters
Certification: Diploma
Prerequisite: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level or equivalent. Satisfactory evidence of normal hearing and manual dexterity based on College tests. Interest in music indicated by Grade 6 standard in Ontario examinations in a musical instrument, or equivalent, or some evidence of extraordinary interest in the craft.

Background: Manual shop skills are an asset.

The Piano Technician program has been developed in response to demand from performing musicians, private owners of instruments, and such institutions as school boards, universities, concert halls and music schools for technicians trained in piano tuning, instrument preservation and repair.

The program, provides training in piano tuning; action regulation, repair and renewal; string, wrestplank, soundboard and bridge repair and replacement; finish work; harpsichord; cabinetry and refinishing; history of musical instruments; machine shop; older instruments; music appreciation, and a variety of communications, business and academic subjects.

Toolmaking Technician GBC code: EN104

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: Credits in machine shop are desirable.

Graduates of the two-year Toolmaking Technician program can look forward to a career in the modern production process, one that demands skill, application, accuracy and cost-consciousness.

Instruction combines theoretical and practical training in toolmaking and related subjects in well-equipped machine shops and laboratories.

Graduates are eligible for certification by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
ENDR	134	Tool Design (Jig and Fixtures)	64.0
MACH	120	Toolmaking	224.0
NC	126	Numerical Control	48.0
PM	110	Precision Measurement	32.0
MATH	100	Mathematics	64.0
MECH	100	Mechanics	48.0
ENG	100	Language and Communications	32.0
			512.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ENDR	134	Tool Design (Jig and Fixtures)	64.0
MACH	120	Toolmaking	224.0
NC	126	Numerical Control	48.0
MET	100	Metallurgy	32.0
MATH	100	Mathematics	64.0
MECH	100	Mechanics	32.0
ENG	100	Language and Communications	32.0
			496.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
ENDR	242	Die Design	64.0
MACH	204	Diemaking	224.0
NC	208	Numerical Control	48.0
MET	100	Metallurgy	32.0
MATH	200	Mathematics	64.0
MECH	110	Mechanics of Materials	32.0
ED	100	Fundamentals of Supervision	32.0
			496.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
ENDR	242	Die Design	64.0
MACH	204	Diemaking	224.0
NC	208	Numerical Control	48.0
PM	110	Precision Measurement	32.0
MATH	200	Mathematics	64.0
MECH	110	Mechanics of Materials	32.0
ED	100	Fundamentals of Supervision	32.0
			496.0

Welding Specialist GBC code: EN153

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English, year 3 physics, or equivalent with one of the following:—

A) Specialization in welding in a Secondary School.
B) Successful completion of a Welding Fitter program in a College of Applied Arts and Technology.
C) Approved industrial experience.

This program combines practical instruction in well-equipped shops and laboratories with complementary coverage of theory and selected related areas required for a wide range of welding-related occupations. Emphasis is placed on the selection, operation, trouble shooting and industrial application of manual, semi-automatic and fully automatic welding equipment. A successful graduate will have a sound background in weld inspection, quality control, production procedures and metallurgical principles along with a variety of manipulative welding skills.

PROGRAM ROUTE: 1

Semester 1 — 20 weeks

Course		Course Title	Total Hours
WELD	100	Shielded Metal Arc & Oxy-Acetylene Welding	80.0
WELD	101	Gas Tungsten Arc Welding	40.0
WELD	102	Gas Metal Arc Fluxed Cored & Submerged Arc	80.0
WELD	103	Shop & Laboratory Procedures	140.0
MET	100	Metallurgy	40.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	40.0
EL	200	Electric Fundamentals	40.0
ENDR	119	Technical Drawing	40.0
ENDR	118	Descriptive Geometry	40.0
			600.0

Semester 2 — 20 weeks

Course		Course Title	Total Hours
WELD	100	Shielded Metal Arc & Oxy-Acetylene Welding	80.0
WELD	101	Gas Tungsten Arc Welding	40.0
WELD	102	Gas Metal Arc Fluxed Cored & Submerged Arc	80.0
WELD	103	Shop & Laboratory Procedures	140.0
MET	100	Metallurgy	40.0
MATH	100	Mathematics	60.0
ENG	100	Language and Communications	40.0
EL	200	Electric Fundamentals	40.0
ENDR	118	Descriptive Geometry	40.0
ENDR	119	Technical Drawing	40.0
			600.0

Design Technician-Electrical GBC code: EL101

Location: Casa Loma.
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: Credits in physics, electricity, and electronics would be useful as background.

Electrical design technicians work as electrical draftsmen, designers and estimators with engineering consultants, electrical utilities, electrical manufacturers and electrical contractors.

The Electrical Design Technician program is the same as the Electrical Technician program for the first three semesters (47 weeks) and then concentrates on the area of specialization for the final semester (17 weeks).

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
EDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ELTC	103	Amplifiers and Devices	50.0
EL	126A	Control of D/C Apparatus Laboratory	30.0
ELTC	111B	Applied Circuit Analysis II	32.0
ELDR	123	Electrical Drafting	64.0
EL	127A	Electrical Laboratory	96.0
ELTC	203	Computer Aided Design	32.0
ELTC	112C	Laboratory	48.0
ENG	100	Language and Communications	32.0
EL	121A	Direct Current Machines	60.0
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	111L	Applied Circuit Analysis Laboratory	16.0
			480.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ELDR	237	Electrical Drafting	60.0
EL	238	Electrical Laboratory	60.0
EL	242	Electrical Apparatus	90.0
EL	244	Wiring Methods and Code	45.0
ENG	200	Language and Communications	30.0
MATH	200	Mathematics	75.0
EL	234	Electrical Distribution Systems	60.0
EL	126B	Control of A.C. Apparatus Laboratory	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
EL	247	Electrical Design Applications	170.0
ELDR	248	Architectural & Mechanical Blueprint Reading	51.0
EL	249	Electrical Specification Writing	34.0
ENG	200	Language and Communications	34.0
MATH	200	Mathematics	68.0
EL	240	Installation and Branch Circuits	51.0
EL	235	Industrial Electronics	51.0
ENG	255	Technical Report	459.0

Electrical Technician GBC code: EL102

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: An electrical background is helpful but not essential.

George Brown's Electrical Technician program requires 32 weeks of training a year, for two years. Subjects covered include electrical fundamentals, D-C and A-C machines, industrial electronic controls, electrical drafting and related academic subjects.

Graduates will have the academic qualifications for certification in the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ELTC	103	Amplifiers and Devices	50.0
EL	126A	Control of D/C Apparatus Laboratory	30.0
ELTC	111B	Applied Circuit Analysis II	32.0
ELDR	123	Electrical Drafting	64.0
EL	127A	Electrical Laboratory	96.0
ELTC	203	Computer Aided Design	32.0
ELTC	112C	Laboratory	48.0
ENG	100	Language and Communications	32.0
EL	121A	Direct Current Machines	60.0
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	111L	Applied Circuit Analysis Laboratory	16.0
			480.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ELDR	237	Electrical Drafting	60.0
EL	238	Electrical Laboratory AC machines	60.0
EL	242	Electrical Apparatus	90.0
EL	244	Wiring Methods and Code	45.0
ENG	200	Language and Communications	30.0
MATH	200	Mathematics	75.0
EL	234	Electrical Distribution Systems	60.0
EL	126B	Control of A.C. Apparatus Laboratory	30.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
EL	241	Industrial Electronic Control Systems	170.0
ELDR	243	Electrical Drafting	68.0
EL	246	Electrical Laboratory	102.0
EL	250	Electrical Environmental Systems	51.0
ENG	200	Language and Communications	34.0
MATH	200	Mathematics	68.0
ENG	255	Technical Report	17.0
			493.0

Electrical Technologist GBC code: EL102

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year mathematics and English and year 3 physics or equivalent.

Background: An electrical background is helpful but not essential.

The Electrical Technology program is a continuation of the technician program combines both lectures, laboratory, and computer work which is aimed toward making the student able to work on his own with the guidance of his instructors, so that by the time he is ready to graduate he is capable of working independently.

Graduates from the technology program may become designers in a shorter time than technicians and using their design skills they may progress to management positions.

Graduates will have the academic qualifications for certification in the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ELTC	102C	Electronic Fundamentals — Advanced	52.0
ELTC	203	Computer Aided Design	28.0
ELTC	103T	Amplifiers & Devices	91.0
ELDR	123T	Electrical Drafting	64.0
ELTC	111T	Laboratory	16.0
EL	232T	Alternating Current Machines	65.0
EL	134T	Electrical Laboratory	35.0
ELTC	114	Laboratory	77.0
ENG	100	Language and Communications	28.0
MATH	102T	Mathematics	42.0
ELTC	111L	Applied Circuit Analysis Laboratory	16.0
			514.0

Semester 3 — 13 weeks

Course		Course Title	Total Hours
EL	121T	Direct Current Machines	52.0
EL	231T	Electrical Control Systems	65.0
ELDR	233T	Blueprint Reading	26.0
EL	125T	Electrical Laboratory	72.0
MATH	200T	Mathematics	52.0
ELDR	124T	Electrical Drafting	39.0
			306.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
EL	241T	Electrical Distribution Systems	75.0
EL	243T	Protection of Electrical Equipment	75.0
EL	244	Wiring Methods and Code	45.0
ELDR	237	Electrical Drafting	60.0
EL	246T	Electrical Laboratory AC machines	90.0
MATH	300	Mathematics	75.0
ENG	200	Language and Communications	30.0
EL	242T	Industrial Electronic Fundamentals	30.0
			480.0

Semester 5 — 13 weeks

Course		Course Title	Total Hours
EL	351	Industrial Electronic Control Systems	143.0
EL	352	Electrical Environmental Systems	52.0
ELDR	353	Electrical Drafting	52.0
EL	354	Electrical Laboratory	104.0
MATH	400	Mathematics	78.0
ENG	200	Language and Communications	26.0
ENG	255	Technical Report	455.0

Semester 6 — 13 weeks

Course		Course Title	Total Hours
EL	362	Electronic Instruments	52.0
EL	363	Closed Loop Controls	52.0
EL	364	Electrical Machine Design	104.0
EL	365	Electrical Estimating	52.0
PHY	200	Modern Physics	78.0
EC	100	Economics	65.0
ELTC	318	Advance Circuit Analysis	52.0
EL	366	Research Assignment	455.0

Jewellery Arts GBC code: FT102

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. Good eyesight, or corrected vision, is a prerequisite.

Background: The jeweller requires a high degree of manual dexterity, mechanical inclination, patience, initiative and artistic sense.

In the Jewellery Arts program, the student learns manufacturing and custom-design techniques by working with jewels and precious metals in one of four areas: goldsmithing, silversmithing, engraving, or gem-setting. Learning to visualize the properties of line, form and colour in three-dimensional objects is an integral part of the program.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
JWL	160	Introduction to Jewellery	120.0

MET	166	Metallurgy I	16.0
GEM	167	Gemmology I	32.0
CHEM	168	Chemistry I	16.0
DES	169	Design I	32.0
SBM	132	Small Business Management I	64.0
ENA	170	Enamelling I	48.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
JWL	165	Theory of Specialty	12.0
ELECT	000	Elective	60.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
MET	176	Metallurgy II	16.0
GEM	177	Gemmology II	32.0
CHEM	168	Chemistry I	16.0
DES	179	Design for Jewellery Arts	48.0
SBM	142	Small Business Management II	48.0
ENA	180	Enamelling II	48.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
JWL	175	Theory of Specialty	32.0
ELECT	000	Elective	160.0
			480.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
MET	266	Metallurgy III	16.0
GEM	267	Gemmology III	32.0
DES	269	Design	48.0
ENA	270	Enamelling III	32.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
JWL	265	Theory of Specialty	32.0
ELECT	000	Elective	240.0
			480.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
MET	276	Metallurgy IV	16.0
GEM	277	Gemmology IV	32.0
DES	279	Design IV	32.0
ENA	280	Enamelling IV	32.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
JWL	275	Theory of Specialty	32.0
ELECT	000	Elective	256.0
			480.0

Semester 5 — 16 weeks

Course		Course Title	Total Hours
GEM	367	Gemmology	32.0
DES	369	Jewellery Design	32.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
JWL	365	Theory of Specialty	32.0
ELECT	000	Elective	304.0
			480.0

Semester 6 — 16 weeks

Course		Course Title	Total Hours
GEM	377	Gemmology	32.0
DES	379	Jewellery Design	32.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
JWL	375	Theory of Specialty	32.0
ELECT	000	Elective	304.0
			480.0

Jewellery Repairs GBC code: FT402

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Graduation from recognized two-year post-secondary Jewellery Arts program, or a mature person from industry who has been recommended by the Canadian Jewellery Institute. Good eyesight, or corrected vision is essential.

This post-graduate program provides a certificate with specialisation in the repair of all types of jewellery.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
JWL	465	Theory Repairs	32.0
JWL	466	Shop	288.0
GEM	467	Gemmology	32.0
DES	469	Design	48.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
JWL	475	Theory Repairs	32.0
JWL	476	Jewellery Repairs	288.0
GEM	477	Gemmology	32.0
DES	479	Design	48.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
			480.0

Watchmaking GBC code: FT111

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background: Any hobby involving work with small mechanisms would be beneficial. Good eyesight (corrected vision is accepted), and mechanical reasoning abilities are essential.

The basic two-year program in watchmaking prepares the student to service, repair and manufacture all types of mechanical time pieces except chronographs.

After completion of the two-year program the student may qualify to enter an optional third-year to learn how to service all types of complex watch mechanisms including electric and electronic watches (under review).

Instruction is by the project approach for the first three semesters, and a simulated repair shop approach during the fourth, fifth and sixth semester. The college provides the most modern equipment and small tools during the training period. Related horological theory is taught parallel to shop practices.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
WACH	127A	Hairspring Manipulation	57.0
WACH	128A	Filing	76.0
WACH	129A	Lathe Operations	133.0
WACH	131A	Watchmaking Theory	95.0
MET	130A	Metallurgy I	38.0
SBM	132B	Small Business Management—Watchmakers	38.0
ENG	100A	Language and Communications	38.0
AUD	350	Audit Relevant Courses	57.0
RSCH	350	Research and Survey	38.0
			570.0

Semester 2 — 19 weeks

Course		Course Title	Total Hours
WACH	126B	Balance Work	95.0
WACH	127B	Hairspring Manipulation	95.0
WACH	128B	Filing	38.0
WACH	129B	Lathe Operations	38.0
WACH	131B	Watchmaking Skills	38.0
SBM	132C	Small Business Management—Watchmakers	95.0
MET	130	Metallurgy I	38.0
ENG	100	Language and Communications	38.0
AUD	351	Audit Relevant Courses—Course Projects	57.0
RSCH	351	Research & Survey—Course Projects	38.0
			570.0

PROGRAM ROUTE: 2

Semester 1 — 16 weeks
For Jewellers from Industry

Course		Course Title	Total Hours
JWL	465	Theory Repairs	32.0
JWL	466B	Shop	160.0
GEM	467	Gemmology	32.0
DES	469	Design	48.0
JWL	436	Shop General Jewellery	64.0
MET	266	Metallurgy III	16.0
CHEM	168A	Chemistry II	16.0
SBM	132D	Small Business Man. For Jewellry Repairs	32.0
AUD	300	Audit Relevant Courses—Course Projects	48.0
RSCH	300	Research & Survey—Course Projects	32.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
JWL	475	Theory Repairs	32.0
JWL	476B	Jewellery Repairs	160.0
GEM	477	Gemmology	32.0
DES	479	Design	48.0
JWL	446	Shop General Jewellery	64.0
MET	276	Metallurgy IV	16.0
CHEM	168B	Chemistry II	16.0
SBM	142	Small Business Management II	32.0
AUD	351	Audit Relevant Courses—Course Projects	48.0
RSCH	351	Research & Survey—Course Projects	32.0
			480.0

Semester 3 — 19 weeks

Course		Course Title	Total Hours
WACH	227A	Balance and Hairspring Manipulation	133.0
WACH	231A	Watchmaking Skills	133.0
WACH	232A	Theory of Watchmaking	95.0
ENG	200A	Language and Communications	38.0
PHY	121	Physics	19.0
ENDR	143A	Drafting	57.0
AUD	300	Audit Relevant Courses—Course Projects	57.0
RSCH	300	Research & Survey—Course Projects	38.0
			570.0

Semester 4 — 19 weeks

Course		Course Title	Total Hours
WACH	224	Watch Overhaul	114.0
WACH	225	Escapement Matching	57.0
WACH	227B	Balance & Hairspring Manipulation	57.0
WACH	231B	Watchmaking Skills	38.0
WACH	232B	Theory of Watchmaking	95.0
EC	111	Economics	19.0
ENDR	143B	Drafting	57.0
ENG	200B	Language & Communications	38.0
AUD	351	Audit Relevant Courses—Course Projects	57.0
RSCH	351	Research & Survey—Course Projects	38.0
			570.0

Semester 5 — 19 weeks

Course		Course Title	Total Hours
WACH	331A	Lathe Operations	57.0
WACH	330	Horology Theory	247.0
WACH	334A	Watch Overhaul and Adjustment	76.0
WACH	335A	Applied Electronics	57.0
MATH	136A	Mathematics	38.0
AUD	300	Audit Relevant Courses—Course Projects	57.0
RSCH	300	Research & Survey—Course Projects	38.0
			570.0

Semester 6 — 19 weeks

Course		Course Title	Total Hours
WACH	331B	Lathe Operations	57.0
WACH	334B	Watch Overhaul	57.0
WACH	324	Chronograph Overhaul & Adjustment	57.0
WACH	336	Electronic Watch Servicing	114.0
WACH	330B	Horology Theory	76.0
WACH	335B	Applied Electronics	38.0
MATH	136B	Mathematics for Watchmakers	76.0
AUD	351	Audit Relevant Courses—Course Projects	57.0
RSCH	351	Research & Survey—Course Projects	38.0
			570.0

Dental Assisting GBC code: DE141

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in biology and chemistry in years 3 and 4 at, or above, the general level, or equivalent. In addition, candidates must provide proof of typing at 40 W.P.M. attend a selection interview, and undertake an aptitude test.

The certified dental assistant is trained to assist the dentist or other dental auxiliary in delivery of dental care to the public. In addition to administration skills and clinical roles the Certified Dental Assistant is trained to expose and develop dental radiographs.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ANAT	102	Dental Anatomy	45.0
DENT	106	Dental Materials	45.0
PCT	101	Pre-clinical Techniques	75.0
DENT	109	Radiology	45.0
BIO	102	Human Biology	30.0
BIO	104	Microbiology	15.0
ENG	110	Language & Communications	45.0
ADM	100	Administration	30.0
PSY	100	Social Psychology	45.0
DENT	115	Orientation to Dentistry	30.0
			405.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
BIO	102	Human Biology	34.0
PHAR	102	Pharmacology & Emergency Care	34.0
PATH	100	Oral Pathology "A"	17.0
NUT	101	Nutrition-A	17.0
DENT	104	Preventitive Dentistry-A	17.0
DENT	109	Radiology	17.0
ENG	109	Language & Communications	51.0
DENT	106	Dental Materials	34.0
PSY	100	Social Psychology	51.0
PCT	102	Clinical Techniques	170.0
			442.0

Dental Hygiene GBC code: DE142

Location: Casa Loma
Length: 2 Semesters
Certification: Certificate
Prerequisites: Applicants must be Certified Dental Assistants, and may be required to write a provincial selection examination and attend a selection interview.

The dental hygienist is trained to work with the patient under the general supervision of a dentist. Services provided to the patient are of a preventive nature.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ANAT	204	Anatomy — Head & Neck	45.0
HIST	100	Dental Histology & Embryology "A"	30.0
NUT	202	Nutrition — Biochemistry B	30.0
DENT	204	Preventive Dentistry — B	30.0
ENG	205	Language & Communications	30.0
PATH	200	Oral Pathology B	15.0
DENT	217	Community Dentistry	15.0
PCT	201	Pre-clinical techniques	180.0
DENT	116	Oral Examination	30.0
			405.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
NUT	203	Nutrition Counselling "C"	17.0
HIST	100	Dental Histology & Embryology "A"	17.0
PERI	100	Periodontics	34.0
ORTH	100	Orthodontics	17.0
PAED	100	Paedodontics	17.0
DENT	209	Advanced Radiography	17.0
BESC	101	Behavioural Science	17.0
PCT	203	Clinical Techniques	255.0
DENT	206	Dental Health Education	34.0
			418.0

Dental Hygiene (Expanded Duties) GBC code: DE400

Location: Casa Loma
Length: 1 Semester
Certification: Certificate
Prerequisites: Applicants must be graduates of a Dental Hygiene program and provide proof of Ontario certification. Candidates may have to write a provincial examination and attend a selection interview.

The Ontario government legislation describes the role of the expanded function dental hygienist as a restorative dentistry assistant. This dental worker is capable of performing many tasks previously assigned only to a dentist. Included are such activities as placement and finishing of dental restorations, cementation of temporary crowns and some orthodontic procedures.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
CHEM	207	Chemistry & Science of Dental Materials	32.0
ORTH	400	Orthodontics	32.0
MED	100	Oral Medicine	32.0
HIST	400	Dental Histology & Embryology "B"	16.0
PCT	401	Pre-clinical techniques	120.0
PCT	402	Clinical Techniques	144.0
			376.0

Dental Technology GBC code: DE102

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma.
Prerequisites: Ontario Secondary School Graduation Diploma with credits in physics, chemistry and biology in years 3 and 4 at, or above, the general level, or equivalent. Applicants must attend a selection interview, take a manual dexterity test and undertake an aptitude test.

Background; Credit in the sciences beyond the grade XII level are recommended.

The dental technician makes a major contribution to the practice of dentistry. This dental worker fabricates all the various appliances used by the dentist in the treatment of patients.

The program at George Brown is the only one of its kind in the province. The teaching program is highly project oriented and there is a low student-instructor ratio which allows for much individual instruction throughout the program.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
BIO	107	Biology	30.0
ANAT	103	Dental Anatomy	30.0

ENG	100	Language & Communications	30.0
MATH	107	Mathematics	30.0
LAB	100	Dental Laboratory and Lecture	300.0
CHEM	107	Chemistry and Science of Dental Material	30.0
			450.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
BIO	107	Biology	34.0
ANAT	103	Dental Anatomy	34.0
ENG	100	Language & Communications	34.0
MATH	107	Mathematics	34.0
LAB	100	Dental Laboratory and Lecture	306.0
CHEM	107	Chemistry and Science of Dental Material	34.0
DENT	101	Dental (Manipulation) Technology	34.0
			510.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
CHEM	207	Chemistry of Dental Materials	30.0
EC	100	Economics	30.0
ENG	200	Language & Communications	30.0
PSY	200	Social Psychology	30.0
HR	200	Personnel Management	15.0
MET	200	Metallurgy	30.0
LAB	200	Dental Laboratory and Lecture	300.0
			465.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
CHEM	200	Chemistry & Equipment	34.0
EC	100	Economics	34.0
ENG	200	Language and Communications	34.0
PSY	200	Social Psychology	34.0
HR	200	Personnel Management	17.0
MET	200	Metallurgy	34.0
LAB	200	Dental Laboratory and Lecture	340.0
			527.0

Semester 5 — 15 weeks

Course		Course Title	Total Hours
NUT	300	Nutrition and Diet	15.0
DENT	316	Community Dentistry, Ethics & Jurisprudence	30.0
LAB	300	Dental Laboratory and Lecture	300.0
SBM	200	Small Business Management	30.0
			375.0

Semester 6 — 17 weeks

Course		Course Title	Total Hours
LAB	300	Dental Laboratory and Lecture	340.0
SMB	200	Small Business Management	34.0
LAB	301	Field Work	102.0
			476.0

Denture Therapy GBC code: DE106

Location: Casa Loma
Length: 5 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in physics, chemistry and biology in years 3 and 4 at, or above, the general level, or equivalent. Applicants must attend a selection interview, take a manual dexterity test, and undertake an aptitude test.

Background: Credits in the sciences beyond the grade 12 level are recommended.

In 1974 the Ontario Government passed legislation to establish a new type of dental health worker — the denture therapist. This auxiliary may deal directly with the public in carrying out certain functions which were previously the sole prerogative of the dentist.

Students are trained in the technical areas required to fabricate and insert dentures, instruction also involves an understanding of the patient and includes such subjects as anatomy, physiology, microbiology, bacteriology and nutrition.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
BIO	102	Human Biology	30.0
ENG	100	Language & Communications	30.0
EC	101	Economics	30.0
MATH	107	Mathematics	30.0
LAB	101	Dental Laboratory & Lecture	300.0
CHEM	107	Chemistry and Science of Dental Material	30.0
ANAT	102	Dental Anatomy	30.0
BIO	104	Microbiology	15.0
			495.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
BIO	102	Human Biology	34.0
ENG	100	Language & Communications	34.0
EC	101	Economics	34.0
MATH	107	Mathematics	34.0
LAB	101	Dental Laboratory & Lecture	340.0
CHEM	107	Chemistry and Science of Dental Material	34.0
DENT	101	Dental (Manipulation) Technology	34.0
PHAR	102	Pharmacology & Emergency Care	34.0
PATH	100	Oral Pathology "A"	17.0
			595.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
ANAT	204	Anatomy — Head & Neck	45.0
ANAT	205	Advanced Dental Anatomy	15.0
PATH	200	Oral Pathology B	15.0
SBM	200	Small Business Management	30.0
PSY	200	Social Psychology	30.0
LAB	201	Dental Laboratory & Lecture	45.0
DTC	200	Denture Therapy — Clinical	180.0
CHEM	207	Chemistry & Science of Dental Materials	30.0
PROS	204	Prosthodontics	60.0
			450.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
HIST	100	Dental Histology & Embryology "A"	34.0
PROS	204	Prosthodontics	102.0
SBM	200	Small Business Management	34.0
PSY	200	Social Psychology	34.0
BESC	101	Behavioural Science	51.0
CHEM	207	Chemistry & Science of Dental Materials	34.0
DTC	200	Denture Therapy — Clinical	204.0
			493.0

Semester 5 — 20 weeks

Course		Course Title	Total Hours
NUT	301	Nutrition & Diet	30.0
DENT	316	Community Dentistry, Ethics & Jurisprudence	30.0
DTC	300	Denture Therapy — Clinical	225.0
DTFW	300	Denture Therapy — Field Work	45.0
MED	100	Oral Medicine	30.0
HIST	100	Dental Histology & Embryology "A"	15.0
			375.0

Orthotic-Prosthetic Techniques GBC code: DE110

Location: Casa Loma
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in biology and physics at, or above, the general level, or equivalent. Candidates must undertake an aptitude test.

Background: Machine shop, drafting, and the ability to use hand tools are assets.

The orthotic prosthetic technician is employed in hospitals, rehabilitation centres and private clinics. He or she, in association with the orthotist prosthetist, makes braces and artificial limbs which are fitted to help rehabilitate disabled patients. Appliances are made of plastics, metal, and leather from plaster casts and drawings.

The student can train for this challenging profession in the two-year technician program. The third year which is optional, combined with two years internship in a certified facility, enables the student to sit for certification by the Canadian Board for Certification of Prosthetists and Orthotists.

This program will appeal to people who are interested in working with people and helping patients in their attempts to overcome their disabilities.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
ANAT	104	Gross Anatomy	32.0
PROS	101	Materials and Laboratory Techniques	224.0
ENDR	113	Technical Drawing	48.0
MET	100	Metallurgy	32.0
MATH	104	Mathematics	32.0
WELD	147	Welding Techniques	48.0
PROS	100	Orthotics-Prosthetics Theory	32.0
MECH	104	Mechanics	32.0
			480.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
ANAT	104	Gross Anatomy	32.0
PROS	101	Materials and Laboratory Techniques	224.0
MACH	126	Machine Shop	48.0
ENDR	113	Technical Drawing	48.0
MET	100	Metallurgy	32.0
MATH	104	Mathematics	32.0
PROS	100	Orthotics-Prosthetics Theory	32.0
MECH	104	Mechanics	32.0
			480.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
ENG	100	Language & Communications	32.0
PL	125	Plastics	32.0
ELTC	130	Electronics	48.0
PROS	200	Orthotic and Prosthetic Theory	32.0
PROS	203	Field Training	96.0
PROS	201	Materials and Lab Techniques	208.0
MECH	114	Strength of Materials	32.0
			480.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
ENG	100	Language & Communications	32.0
PL	125	Plastics	32.0
ELTC	130	Electronics	48.0
PROS	200	Orthotic and Prosthetic Theory	32.0
PROS	203	Field Training	96.0
PROS	201	Materials and Lab Techniques	208.0
MECH	114	Strength of Materials	32.0
			480.0

Semester 5 — 16 weeks

Course		Course Title	Total Hours
PROS	300	Orthotic-Prosthetic Theory	16.0
PROS	301	Advanced Lab Techniques	64.0
BIO	302	Biomechanics	32.0
PROS	303	Field Training	144.0
PROS	304	Rehabilitation Medicine	48.0
PROS	305	Research Project	32.0
PSY	303	Social and Vocational Rehab	16.0
ANAT	300	Anatomy& Physiology	48.0
PATH	305	Pathophysiology	32.0
PSY	202	Psychology	32.0
SURG	300	Orthopedic Surgery — Lecture	16.0
			480.0

Semester 6 — 16 weeks

Course		Course Title	Total Hours
PROS	300	Orthotic-Prosthetic Theory	16.0
PROS	301	Advanced Lab Techniques	128.0
PATH	305	Pathophysiology	32.0
PSY	202	Psychology	32.0
PROS	305	Research Project	32.0
ANAT	300	Anatomy & Physiology	48.0
BIO	302	Biomechanics	32.0
PROS	303	Field Training	144.0
			464.0

Fitness Instructor GBC code: PE14(

Location: Casa Loma
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Schoo
Graduation Diploma with credits i
mathematics, chemistry and biology in years
and 4 at, or above, the general level, o
equivalent.

Background: Credits in chemistry and/o
biology at the senior level are desirable.

Since people are becoming more aware o
the importance of physical fitness, the demand
for trained people to operate fitness facilities
increasing. The two-year Fitness Instructo
program trains the student to operate fitnes
facilities offered by private and governmen
agencies and hospitals.

This program places special emphasis o
physical testing procedures and the designin
of exercise programs according to the ind
vidual's requirements. Extensive laborator
work is included.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Tota Hour
FIT	104	Muscle Physiology	80.
MATH	112	Mathematics	64.
ENG	100	Language and Communications	48.
ADM	101	Administration Practice in Fitness Education	48.
ANAT	105	Anatomy	64.
FIT	100	Introduction to Fitness Testing	80.
FIT	102	Applied Exercise Techniques	64.0
HEAL	101	Athletic Injuries	32.0
			496.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
NUT	103	Nutrition	48.0
FIT	100	Introduction to Fitness Testing	48.0
MATH	112	Mathematics	64.0
ENG	100	Language and Communications	48.0
ANAT	105	Anatomy	64.0
PSY	104	Social Psychology	48.0
FIT	102	Applied Exercise Techniques	64.0
HEAL	201	Guidelines for Activity Special Cases	48.0
FIT	103	Exercise Psychology	48.0
			480.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
NUT	201	Nutrition Counselling	48.0
FIT	201	Movement Evaluation & Programming	48.0
ADM	201	Exercise Class Organization & Leadership	64.0
AQUA	100	Aquatic Skill Development	64.0
FIT	202	Guidelines to Exercise Programming	96.0
FIT	203	Cardiovascular Physiology	64.0
HEAL	203	Business Management Skills	96.0
			480.0

Semester 4 — 8 weeks

Course		Course Title	Total Hours
NUT	201	Nutrition Counselling	16.0
AQUA	100	Aquatic Skill Development	32.0
ADM	201	Exercise Class Organization & Leadership	40.0
FIT	204	Movement Evaluation & Programming	64.0
FIT	202	Guidelines to Exercise Programming	64.0
HEAL	203	Business Management Skills	32.0
FIT	203	Cardiovascular Physiology	32.0
PROJ	205	Co-op Training in Fitness Field	160.0
			400.0

Addiction Counsellor GBC code: AP103

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. A good command of verbal and written English is needed. A satisfactory medical examination is compulsory.

Background: The course is primarily aimed at the older student with volunteer social service experience, post-high school work or both. The person able to communicate well and to show empathy is preferred. Some knowledge of biology and chemistry is desirable.

This program prepares the student to be a counsellor in the mental health field with special expertise in chemical dependency including alcohol, serving a variety of individuals, agencies and communities.

The two year program is divided equally into classroom instruction and supervised field work experience.

Through group discussion and field work seminars students have opportunities to increase self-awareness and to develop their strengths.

The field work provides opportunities to practice counselling skills in two settings under the supervision of qualified practitioners. The Diploma requires a total of 1000 hours of supervised field work.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
AD	100	Field Practice	210.0
AD	101	Human Growth and Behaviour	30.0
AD	102	Group Process	37.5
AD	103	Social Issues Problems and Services	30.0
AD	105	Basic Studies in Addiction	30.0
AD	106	Theory Methods and Practice of Therapy	45.0
ENG	113	Language & Communications	30.0
AD	112	Field Work Seminar	22.5
			435.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
AD	100	Field Practice	210.0
AD	101	Human Growth and Behaviour	30.0
AD	102	Group Process	37.5
AD	103	Social Issues Problems and Services	30.0
PHYS	104	Physiology and Pharmacology	30.0
AD	106	Theory Methods and Practice of Therapy	45.0
SOC	107	Sociology	30.0
AD	112	Field Work Seminar	22.5
ENG	113	Language & Communications	30.0
			465.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
AD	200	Field Practice	300.0
AD	201	Human Growth and Behaviour	30.0
AD	202	Group Process	30.0
AD	206	Theory Methods and Practice of Therapy	30.0
SOC	207	Sociology	30.0
AD	208	Values Ethics and Professionalism	30.0
AD	209	Research and Independent Studies	30.0
AD	212	Field Work Seminar	15.0
			495.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
AD	200	Field Practice	300.0
AD	201	Human Growth and Behaviour	30.0
AD	202	Group Process	30.0
AD	206	Theory Methods and Practice of Therapy	30.0
AD	209	Research and Independent Studies	30.0
AD	212	Field Work Seminar	15.0
AD	211	Community Practice	30.0
			465.0

Child Care Worker GBC code: AP101

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent,

with proficiency in English. Volunteer or work experience with older children and/or adolescents. A personal interview is required before acceptance into the program. A satisfactory medical examination is also required.

Background: The ability to cope at a post secondary level in written and verbal communications is required. Minimum age — 18 at date of registration.

The objective of the Child Care Worker program is to prepare skilled child care workers for a creative career as part of a therapeutic team of professionals concerned with the treatment and rehabilitation of disturbed and troubled children both in residential treatment centres and in the community.

The academic subjects offered in the program include Caring for the Disturbed Child, Human Growth and Development, Psychopathology of Childhood, Treatment Philosophies and Therapeutic Programming.

All students have a significant component of on-the-job training through supervised field placements throughout the two year program.

The program emphasizes the development of self-awareness, emotional maturity and professional responsibility.

There is a great need for men as well as women in the child care field.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
CHI	160	Field Practice	315.0
CHI	161	Human Growth and Development	22.5
CHI	162	Health First Aid	45.0
CHI	164	Caring for the Disturbed Child	22.5
CHI	165	Activities with Children	22.5
SOC	171	Introductory Sociology	30.0
CHI	174	Empathy Training	22.5
CHI	172	Group Process I	30.0
CHI	167	Student Group Seminar	17.0
			527.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
CHI	160	Field Practice	315.0
CHI	161	Human Growth and Development	22.5
CHI	165	Activities with Children	22.5
CHI	167	Student Group Seminar	15.0
CHI	172	Group Process I	30.0
PSY	169	Introductory Psychology	30.0
CHI	164	Caring for the Disturbed Child	22.5
CHI	166	Social Services	30.0
CHI	174	Empathy Training	22.5
			510.0

Semester 3 — 17 weeks

Course		Course Title	Total Hours
CHI	260	Field Practice	384.0
PSY	261	Psychopathology of Childhood	22.5
CHI	262	Caring for the Disturbed Child	22.5
CHI	272	Working with Families	30.0
CHI	267	Student Group Seminar	15.0
CHI	268	Treatment Philosophies	22.5
CHI	270	Group Process II	22.5
CHI	275	Adolescence	30.0
			549.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
CHI	260	Field Practice	360.0
PSY	261	Psychopathology of Childhood	22.5
CHI	262	Caring for the Disturbed Child	22.5
CHI	268	Treatment Philosophies	22.5
CHI	270	Group Process II	22.5
CHI	271	Therapeutic Programming	30.0
CHI	267	Student Group Seminar	15.0
CHI	276	Adolescent Role & Identity	30.0
			525.0

Community Worker GBC code: AP101

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. Applicants are required to complete a questionnaire and have a personal interview. A satisfactory medical examination is required.

Background: Extensive life experience, belief in the involvement of people in decisionmaking, commitment to social change and previous community involvement are assets. The ability to communicate verbally and in writing is essential.

The Community Worker program enables people with some experience in community work to enhance and develop their knowledge and skills. It has been developed in consultation with experienced community workers representing grass-roots community groups and public and private agencies.

The program consists of classroom instruction (mostly seminar style) and field work practice. The practical experience in the community is the primary focus of the program. Opportunities are provided for the student to develop greater understanding and insight into human relationships and organizations through formal instruction and the sharing of life experiences and ideas. Each student is expected to be mature and purposeful and assume the major responsibility for his or her own learning.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
CW	100	Field Work	240.0
CW	101	Field Work Seminar	30.0
CW	102	Community Services and Resources	30.0
CW	104	Community Practices and Methods	30.0
CW	105	Group Process I	30.0
CW	207	Political Science	30.0
CW	107	Human Growth and Development	30.0
SOC	108	Comparative Sociology	30.0
ENG	113	Language & Communications	30.0
			480.0

Semester 2 — 15 weeks

Course		Course Title	Total Hours
CW	100	Field Work	240.0
CW	101	Field Work Seminar	30.0
CW	102	Community Services and Resources	30.0
CW	104	Community Practices and Methods	30.0
CW	105	Group Process I	30.0
CW	207	Political Science	30.0
CW	107	Human Growth and Development	30.0
SOC	108	Comparative Sociology	30.0
ENG	113	Language & Communications	30.0
			480.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
CW	200	Field Work	300.0
CW	201	Field Work Seminar	30.0
CW	203	Canadian Society and Social Change	30.0
CW	204	Communications and Understanding Media	30.0
CW	205	Group Process II	30.0
CW	106	Community Development	30.0
CW	208	Analysis of Health Services	15.0
CW	209	Basic Support & Intervention Skills	15.0
			480.0

Semester 4 — 15 weeks

Course		Course Title	Total Hours
CW	200	Field Work	300.0
CW	201	Field Work Seminar	30.0
CW	202	Business and Administration	30.0
CW	203	Canadian Society and Social change	30.0
CW	205	Group Process II	30.0
CW	106	Community Development	30.0
CW	208	Analysis of Health Services	15.0
CW	209	Basic Support & Intervention Skills	15.0
			480.0

Early Childhood Education GBC code: AP105

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. Applicants are required to complete a questionnaire and have a personal interview. A satisfactory medical examination is required.

Background: Experience of working with infants and young children is desirable, although not essential.

This program combines Early Childhood Courses with an added specialization in Infant Care and Development. Students are trained to work with children aged six weeks to 10 years in nursery and day care settings. Emphasis is placed on the provision of family-oriented day care services through courses dealing with human development, creative expression, programming, the family and administration.

Each semester is divided into blocks of eight weeks. One eight week block is for academic studies, the other is for field placement where students have the opportunity to practice with children of all ages in a variety of settings.

Graduates receive an Early Childhood Education Diploma and are eligible, after two years work experience, to apply for certification by the Association for Early Childhood Education of Ontario.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
DCW	100	Infant and Child Development	32.0
DCW	101	Health & Well Being	32.0
PSY	102	Introductory Psychology	16.0
DCW	103	Mental Health	16.0
DCW	104	Principles of Day Care	32.0
DCW	105	Creative Expression in Childhood	32.0
SOC	106	Introductory Sociology	16.0
DCW	107	Community Services	16.0
DCW	111	Field Work Seminar	12.0
DCW	113	Field Practice	216.0
ECE	116	Storytelling & Literature	8.0
ECE	117	Music	8.0
ENG	114	Language & Communications	16.0
			452.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
DCW	100	Infant and Child Development	32.0
DCW	101	Health & Well Being	32.0
PSY	102	Introductory Psychology	16.0
DCW	103	Mental Health	16.0
DCW	104	Principles of Day Care	32.0
DCW	105	Creative Expression in Childhood	32.0
SOC	106	Introductory Sociology	16.0
ECE	111	Field Work Seminar	12.0
DCW	114	Field Practice	216.0
DCW	107	Community Services	16.0
ECE	116	Storytelling & Literature	8.0
ECE	117	Music	8.0
ENG	114	Language & Communications	16.0
			456.0

Semester 3 — 16 weeks

Course		Course Title	Total Hours
DCW	200	Human Growth and Development	32.0
DCW	201	Children with Special Needs	16.0
DCW	202	Cognitive Development	32.0
DCW	204	Varieties of Day Care	16.0
DCW	203	Planning Management and Legislation	24.0
DCW	206	Family Dynamics	32.0
DCW	207	Parent Interviewing and Counselling	32.0
DCW	208	Professional Development	16.0
ECE	214	Group Process	12.0
DCW	210	Field Work Seminar	12.0
DCW	212	Field Placement	216.0
ECE	215	Language Arts & Drama	8.0
ECE	216	Science Experience	8.0
			444.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
DCW	200	Human Growth and Development	32.0
DCW	201	Children with Special Needs	16.0
DCW	202	Cognitive Development	32.0
DCW	204	Varieties of Day Care	16.0
DCW	203	Planning Management and Legislation	24.0
DCW	206	Family Dynamics	32.0
DCW	207	Parent Interviewing and Counselling	32.0
DCW	208	Professional Development	16.0
DCW	210	Field Work Seminar	12.0
DCW	213	Field Placement	216.0
ECE	214	Group Process	12.0
ECE	215	Language Arts & Drama	8.0
ECE	216	Science Experience	8.0
			444.0

Creative Fashion Design GBC code: FT101

Location: Kensington
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent plus artistic aptitude, apparel construction skills or a merchandising orientation.

Background: Credits in art, home economics, mathematics and social sciences are desirable.

The apparel industry in Canada needs new talent in management, design and fashion concepts to maintain and increase its export markets and its reputation for quality.

In the Creative Fashion Design program and Apparel Management, emphasis is placed on the study of three major areas: design and style; pattern; industrial high speed sewing machines, often computer-assisted; fibres and fabrics. Alternating periods of in-plant co-op are provided.

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
AT	161	Operator Training I	640

	141	Apparel Pattern Drafting I	80.0
AT	100	Fashion Business Procedures	16.0
ASH	151	Technical Report Writing	32.0
NG	150	Fabrics I	32.0
AB	300	Research & Survey — Course Projects	32.0
SCH		Audit Relevant Courses — Course Projects	48.0
UD	300	Elective	
LECT	000	Elective	
LECT	000	Elective	
LECT	000	Elective	
LECT	000		
			304.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
AB	160	Fabrics II	48.0
T	101	Work Management II	48.0
NG	181	Technical Report Writing II	32.0
SCH	351	Research & Survey — Course Projects	32.0
UD	351	Audit Relevant Courses — Course Projects	48.0
LECT	000	Elective	
LECT	000	Elective	
LECT	000	Elective	
LECT	000	Elective	
LECT	000	Elective	
			208.0

Option: 1 Apparel Section Supervisor

Semester 3 — 16 weeks

Course		Course Title	Total Hours
EW	141A	Sewing Machine Operation — Flatbed, Serger	80.0
EW	245	Sewing Machines; Methods	16.0
EW	244	Special Machines, Cutting, etc.	80.0
EW	241	Apparel Plant Supplies	64.0
AT	173	Personnel and Industrial Relations	48.0
AT	163	Personnel & Industrial Relations IA (Train)	48.0
UD	300	Audit Relevant Courses — Course Projects	48.0
SCH	300	Research & Survey — Course Projects	32.0
LECT	000	Elective	
LECT	000	Elective	
			416.0

OPTION: 1 Apparel Section Supervisor

Semester 4 — 16 weeks

Course		Course Title	Total Hours
SEW	143	Blind Stitch, Buttonhole and Sewing Machines	80.0
SEW	242A	Sewing Machine Attachments	16.0
AT	174	Managerial Organization	48.0
AT	175	Personnel & Industrial Relations	48.0
FAB	151	Fabrics, Threads, Supplies	32.0
AT	153	Needle Trade Technology	64.0
PAT	242	Pattern Markers, Pattern Layout	48.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 2 Couture Workroom Supervisor

Semester 3 — 16 weeks

Course		Course Title	Total Hours
DRES	241	Couture Construction	96.0
DRES	242	Fabrics III	48.0
DRES	244	Alterations, Fitting — Advanced	96.0
AT	173	Personnel and Industrial Relations	48.0
SEW	242A	Sewing Machine Attachments	16.0
PAT	241	Pattern Drafting Changes — V	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 2 Couture Workroom Supervisor

Semester 4 — 16 weeks

Course		Course Title	Total Hours
DRES	251	Couture Construction	96.0
DRES	252	Fabrics — Knits, Trims, Braids	48.0
DRES	254	Alterations, Fitting (Advanced)	96.0
AT	174	Managerial Organization	48.0
SEW	252A	Special Sewing Machines	16.0
PAT	251	Pattern Drafting VI	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0

RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 3 Fashion Apparel Design
Semester 3 — 16 weeks

Course		Course Title	Total Hours
PAT	261	Pattern Drafting	112.0
PAT	243	Fashion — Research	32.0
PAT	252	Apparel Design III — Advanced	48.0
DRES	247	Dressmaking Construction III — Advanced	48.0
DRES	246	Tailoring III — Men's	48.0
ENG	251	Technical Report Writing III	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			400.0

Option: 3 Fashion Apparel Design
Semester 4 — 16 weeks

Course		Course Title	Total Hours
PAT	271	Pattern Drafting	128.0
PAT	262	Apparel Design	32.0
DRES	221	Couture Construction	48.0
DRES	256	Tailoring IV	32.0
DRES	222	Alterations & Fitting	32.0
ENG	254	Technical Report Writing	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			384.0

Option: 4 Fashion Fur Design
Semester 3 — 16 weeks

Course		Course Title	Total Hours
PAT	231	Pattern Drafting	64.0
FUR	245	Fur & Leather Design	48.0
FUR	244	Fur Manufacturing Techniques	48.0
LTH	204	Leather Manufacturing Techniques	16.0
DRES	222	Alterations & Fitting	32.0
DRES	256	Tailoring IV	32.0
FUR	243	Fur Look-Alikes	16.0
LTH	203	Leather & Suede Types	32.0
FUR	247	Fur Buying	16.0
ENG	251A	Fashions in Literature — Business Writing	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 4 Fashion Fur Design
Semester 4 — 16 weeks

Course		Course Title	Total Hours
PAT	281	Pattern Drafting	96.0
FUR	255	Fur & Leather Design	48.0
FUR	254	Fur Manufacturing Techniques	48.0
LTH	254	Leather Manufacturing Techniques	16.0
DRES	257	Couture Construction	32.0
FUR	253	Fur Look-Alikes	32.0
LTH	253	Leather Types	16.0
FUR	257	Fur Buying	16.0
ENG	254	Technical Report Writing	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			416.0

Option: 5 Apparel Buying Trainee
Semester 3 — 16 weeks

Course		Course Title	Total Hours
DRES	249	Store Workroom Problems	64.0
AT	141	Personnel & Industrial Relations	64.0
DRES	241A	Couture Construction	80.0
FAB	152	Fabric I — Characteristics	48.0
AT	211	Apparel Merchandising III	64.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			400.0

Option: 5 Apparel Buying Trainee
Semester 4 — 16 weeks

Course		Course Title	Total Hours
DRES	255	Tailoring	80.0
DRES	248	Apparel Plant Supplies	64.0
AT	232	Apparel Merchandising	64.0
AT	230	Personnel & Industrial Relations	64.0

AS	332	Managerial Accounting	64.0
CID	351	Audit Relevant Courses — Course Projects	48.0
SCH	351	Research & Survey — Course Projects	32.0
LECT	000	Elective	
LECT	000	Elective	
			416.0

Option: 6 Sequence Only
Semester 5 — 16 weeks

Course		Course Title	Total Hours
AT	341	Apparel Pattern Drafting VII	64.0
ES	300	Design-A-Line	336.0
SCH	300	Research & Survey — Course Projects	32.0
UD	300	Audit Relevant Courses — Course Projects	48.0
			480.0

Option: 7 Sequence only
Semester 6 — 16 weeks

Course		Course Title	Total Hours
ES	351	Design-A-Line	400.0
SCH	351	Research & Survey — Course Projects	32.0
UD	351	Audit Relevant Courses — Course Projects	48.0
			480.0

Apparel Management GBC code: FT103

Location: Kensington
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent, plus artistic aptitude, apparel construction skills or a merchandising orientation.

Background: Credits in art, home economics, mathematics and social sciences are desirable.

The apparel industry in Canada needs new talent in management, design and fashion concepts to maintain and increase its export markets and its reputation for quality.

In the Creative Fashion Design program and Apparel Management, emphasis is placed on the study of three major areas: design and style pattern; industrial high speed sewing machines, often computer-assisted; fibres and fabrics. Alternating periods of in-plant co-op are provided.

The post graduate semesters are designed to prepare the student to become a production manager in multi-plant companies through a theoretical and practical approach to management problems.

PROGRAM ROUTE: 1
Semester 1 — 16 weeks

Course		Course Title	Total Hours
AT	161	Operator Training I	64.0
PAT	141	Apparel Pattern Drafting I	90.0
FASH	100	Fashion Business Procedures	16.0
ENG	151	Technical Report Writing	32.0
FAB	150	Fabrics I	32.0
RSCH	300	Research & Survey — Course Projects	32.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			314.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
AT	222	Apparel Merchandising	48.0
FAB	160	Fabrics II	48.0
AT	151	Needle Trade Technology	48.0
ENG	181	Technical Report Writing II	32.0
RSCH	351	Research & Survey — Course Projects	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
ELECT	000	Elective	
			256.0

Semester 3 — 16 weeks
Ten Week In-plant Co-op Assignments Between Semesters 3 & 4

Course		Course Title	Total Hours
AT	252	Garment Analysis III	32.0
AT	251	Marking & Cutting	48.0
AT	272	Personnel and Industrial Relations III	32.0
ACC	216	Managerial Accounting III	48.0
AT	221	Apparel Merchandising III	32.0
EDP	191	Computer as a Management Tool III	48.0
EC	241	Managerial Economics III	32.0
ENG	251A	Fashions in Literature — Business Writing	48.0
FAB	250	Fabrics III	32.0

AT	152	Needle Trade Technology II	48.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
			480.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
AT	200	Garment Analysis IV	32.0
AT	201	Needle Trade Technology VI	32.0
AT	273	Delivery Schedules	48.0
ACC	332	Managerial Accounting IV	32.0
AT	261	Apparel Merchandising IV	32.0
EDP	253	Computer as a Management Tool IV	48.0
EC	231	Managerial Economics	32.0
ENG	261	Technical Report Writing IV	48.0
FAB	261	Fabrics IV	32.0
AT	271	Managerial Organization IV	32.0
AT	262	Needle Trade Technology III	32.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
			480.0

Semester 5

The two year graduate may apply for entry into the junior year of the apparel degree program at the Philadelphia College of Textiles & Sciences.

Course		Course Title	Total Hours
AT	350	Automated Machinery	64.0
AT	320	Large Plant Problems	64.0
AT	370	Multi-Plant Problems	64.0
FAB	361	Fabrics Testing Lab	80.0
AT	373	Delivery Schedules	64.0
EDP	360	Advanced Computer Uses	64.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
			480.0

Semester 6 — 16 weeks

Course		Course Title	Total Hours
AT	350	Automated Machinery	64.0
AT	320	Large Plant Problems	64.0
AT	370	Multi-Plant Problems	64.0
FAB	361	Fabrics Testing Lab	80.0
AT	373	Delivery Schedules	64.0
EDP	360	Advanced Computer Uses	64.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
			460.0

Furniture Production and Design GBC code: FT10

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background Experience in drawing, woodworking, finishing or upholstery would be an asset.

The program concentrates on the three main skills in furniture manufacturing: cabinet making, finishing and upholstering. In the first year the student will study topics such as construction, design, factory organization and costing. Materials worked include metals, woods and plastics. During the summer the student will work in the industry.

Options: Woodworking
Finishing
Upholstery

PROGRAM ROUTE: 1

Semester 1 — 16 weeks

Course		Course Title	Total Hours
FURN	101	Cabinet and Chairmaking I	64.0
FURN	102	Wood Machining I	48.0
FURN	103	Furniture Finishing I	48.0
FURN	104	Upholstery I	112.0
FURN	105	Materials I	48.0
FURN	106	Technical Drawing and Blueprint Reading	16.0
FURN	108	Furniture Production Management I	16.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	32.0
			464.0

Semester 2 — 16 weeks

Course		Course Title	Total Hours
FURN	151	Cabinet and Chairmaking II	64.0
FURN	162	Wood Machining II	48.0
FURN	163	Woodwork Finishing II	48.0
FURN	154	Upholstery II	112.0
FURN	155	Materials II	48.0
FURN	156	Technical Drawing II	16.0
FURN	158	Furniture Production Management II	16.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
			432.0

Option: 1 Woodworking

Semester 3 — 16 weeks

Course		Course Title	Total Hours
FURN	205	Materials III	16.0
FURN	207	Furniture Design II and Interiors	32.0
FURN	208	Furniture Production Management III	16.0
ENG	252	Furnishing Terminology III	16.0
FURN	201	Cabinet and Chairmaking III	160.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			320.0

Option: 1 Woodworking

Semester 4 — 16 weeks

Course		Course Title	Total Hours
FURN	255	Materials IV	16.0
FURN	257	Design and Interiors IV	32.0
FURN	258	Furniture Production Management IV	16.0
ENG	262	Furnishing Technical Writing IV	16.0
FURN	251	Cabinet and Chairmaking IV	160.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			320.0

Option: 2 Finishing

Semester 3 — 16 weeks

Course		Course Title	Total Hours
FURN	205	Materials III	16.0
FURN	207	Furniture Design II and Interiors	32.0
FURN	208	Furniture Production Management III	16.0
ENG	252	Furnishing Terminology III	16.0
FURN	203	Finishings III	224.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			384.0

Option: 2 Finishing

Semester 4 — 16 weeks

Course		Course Title	Total Hours
FURN	255	Materials IV	16.0
FURN	257	Design and Interiors IV	32.0
FURN	258	Furniture Production Management IV	16.0
ENG	262	Furnishing Technical Writing IV	16.0
FURN	263	Finishings IV	224.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			384.0

Option: 3 Upholstery

Semester 3 — 16 weeks

Course		Course Title	Total Hours
FURN	205	Materials III	16.0
FURN	207	Furniture Design II and Interiors	32.0
FURN	208	Furniture Production Management III	16.0
ENG	252	Furnishing Terminology III	16.0
FURN	204	Upholstery III	208.0
AUD	300	Audit Relevant Courses — Course Projects	48.0
RSCH	300	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			368.0

Option: 3 Upholstery

Semester 4 — 16 weeks

Course		Course Title	Total Hours
FURN	255	Materials IV	16.0
FURN	257	Design and Interiors IV	32.0

FURN	258	Furniture Production Management IV	16.0
ENG	262	Furnishing Technical Writing IV	16.0
FURN	254	Upholstery IV	208.0
AUD	351	Audit Relevant Courses — Course Projects	48.0
RSCH	351	Research & Survey — Course Projects	32.0
ELECT	000	Elective	
ELECT	000	Elective	
			368.0

Culinary Management GBC code: F106

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background: Credits in bookkeeping and business mathematics would be useful as background.

The Culinary Management program provides training in all aspects of food preparation, cooking and presentation to international standards and graduates are well versed in kitchen organization and management. Included in the program are two six-week periods of supervised work experience under top Toronto chefs.

After three years of work in the industry graduates will be eligible to write the Professional Certification Examination of the Escoffier Club.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
MATH	110	Business Mathematics	30.0
FP	104	Food Preparation	285.0
SAN	100	Sanitation and Hygiene	30.0
ENG	107	Business Communications	30.0
ACC	109	Accounting	45.0
HIND	100	Dimensions of the Hospitality Industry	30.0
			450.0

Semester 2 — 21 weeks

Course		Course Title	Total Hours
FP	104	Food Preparation	255.0
HIND	105	Menu Planning	45.0
ACC	110	Purchasing for Hospitality	45.0
ACC	109	Accounting	45.0
PSY	105	Psychology for Hospitality	30.0
ACC	112	Food Cost Control	30.0
HIND	113	Work Experience	180.0
			630.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
EDP	105	Elementary Computer Concepts	30.0
ACC	217	Labour Cost Control	15.0
HIND	219	Management Techniques	30.0
FP	200	Food Preparation	255.0
ACC	208	Food Cost Control	30.0
HIND	204	Facilities Design & Planning	30.0
HIND	205	Food & Beverage Service	30.0
PR	200	Public Relations	30.0
FDR	156	Blueprint Reading and Drafting	15.0
			465.0

Semester 4 — 21 weeks

Course		Course Title	Total Hours
HIND	210	Personnel Management	45.0
CUL	200	Culinary Management Projects	90.0
HIND	225	Facilities Design & Planning	45.0
FP	201	Food Preparation	210.0
LAW	100	Law & Insurance	30.0
HIND	217	Management Practice	180.0
			600.0

Food and Beverage Management GBC code: F107

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background: Credits in bookkeeping and business mathematics would be useful.

The food industry is the most rapidly expanding service sector of Canada's economy. By 1990 it will offer more than 79,000 new jobs. Fascinating opportunities exist in restaurants, commercial, social and industrial catering, airline food service, health care facilities, hotels, resorts and fast food operations.

Students graduate with thorough training in practical skills and management techniques, using modern facilities which include fully-equipped bars and food preparation stations, a private, licensed dining lounge, and a frozen food laboratory.

The latest innovations in food service management are learned with a computerized menu planning system as well as banquet catering, beverage control, restaurant accounting, nutrition and personnel management.

The college has co-operative training programs with many of Toronto's top restaurants and catering establishments, so second-year students can spend two months working with managers, learning every aspect of food management on the job.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
MATH	110	Business Mathematics	45.0
FP	101	Food Preparation	210.0
SAN	100	Sanitation and Hygiene	30.0
ENG	107	Business Communications	30.0
ACC	107	Fundamentals of Hospitality Accounting	30.0
HIND	100	Dimensions of the Hospitality Industry	30.0
HIND	205	Food & Beverage Service	30.0
HIND	108	Mixology	30.0
			435.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
ENG	107	Business Communications	34.0
FP	101	Food Preparation	170.0
HIND	104	Menu Planning	34.0
ACC	108	Purchasing for Hospitality	34.0
ACC	104	Hospitality Accounting Procedures	34.0
PSY	105	Psychology for Hospitality	34.0
HIND	110	Wines	34.0
HIND	112	Dining Room & Lounge Organization	34.0
NUT	100	Nutrition	34.0
MARK	105	Marketing I	34.0
			493.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
HIND	200	Function Organization	15.0
EDP	105	Elementary Computer Concepts	30.0
MARK	213	Marketing II	30.0
ACC	210	Food & Beverage Cost Control	60.0
HIND	218	Financial Management for Hospitality	45.0
HIND	219	Management Techniques	45.0
HIND	220	Equipment & Maintenance	30.0
FP	204	Food Preparation II	90.0
HIND	205	Food & Beverage Service	30.0
FDR	156	Blueprint Reading and Drafting	15.0
HIND	209	Work Experience	90.0
			480.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
HIND	210	Personnel Management	54.0
MARK	214	Marketing III	36.0
HIND	223	Sundry Services	36.0
FBM	200	Food & Beverage Management Projects	48.0
HIND	203	Facilities Design & Planning	54.0
SEC	100	Security	18.0
ACC	217	Labour Cost Control	17.0
LAW	100	Law & Insurance	36.0
HIND	216	Management Practice (Co-op)	192.0
			491.0

Hotel Management GBC code: F108

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent.

Background: Credits in bookkeeping and business mathematics would be useful.

Highly skilled management is vital to the efficient operation of modern hotels. The hotel industry is a round-the-clock business and it needs young men and women who are prepared to meet the challenge it offers.

The Hotel Management program gives the student the training to enter this field. Students learn practical skills in the most modern facilities available including fully-equipped bars and food preparation stations, a private licensed dining lounge and a front desk classroom with individual reception desks. Management techniques are learned with the aid of a computerized model of a hotel operation.

In the well-established co-operative training program second-year students spend two months with the department heads of world-famous Toronto hotels learning under expert supervision what the hotel industry is all about.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
MATH	110	Business Mathematics	45.0
FP	101	Food Preparation	210.0
SAN	100	Sanitation Safety and Hygiene	30.0
ENG	107	Business Communications	30.0
ACC	107	Fundamentals of Hospitality Accounting	30.0
HIND	100	Dimensions of the Hospitality Industry	30.0
HIND	205	Food & Beverage Service	30.0
HIND	108	Mixology	30.0
			435.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
ENG	107	Business Communications	34.0
FP	101	Food Preparation	187.0
HIND	104	Menu Planning	34.0
ACC	108	Purchasing for Hospitality	34.0
ACC	104	Hospitality Accounting Procedures	34.0
PSY	105	Psychology for Hospitality	34.0
HIND	110	Wines	34.0
HIND	112	Dining Room & Lounge Organization	34.0
NUT	100	Nutrition	34.0
MARK	105	Marketing I	34.0
			493.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
HIND	200	Function Organization	15.0
EDP	105	Elementary Computer Concepts	30.0
MARK	213	Marketing II	30.0
ACC	210	Food & Beverage Cost Control	60.0
ACC	218	Financial Management for Hospitality	45.0
HIND	219	Management Techniques	30.0
HIND	220	Equipment & Maintenance	30.0
LAW	100	Law & Insurance	30.0
HIND	207	Front Desk Procedures	45.0
HIND	222	Front Office Operation	45.0
FDR	156	Blueprint Reading and Drafting	15.0
HIND	209	Work Experience	90.0
			435.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
HIND	210	Personnel Management	54.0
MARK	214	Marketing III	36.0
HIND	223	Sundry Services	36.0
HIND	224	Hotel Management Projects	48.0
HIND	203	Facilities Design & Planning	54.0
SEC	100	Security	18.0
HIND	221	Housekeeping	36.0
HIND	216	Management Practice (Co-op)	192.0
			474.0

Theatre Arts GBC code: TH100

Location: Kensington
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. Applicants are interviewed prior to acceptance.

In response to the revival of interest in musical comedy, musical drama and cabaret, the Theatre Arts program places its emphasis on training in the related disciplines of musical theatre.

This two-year program provides an opportunity to gain a foundation of skills, practicalities, traditions, and professionalism for the performing arts.

Enrolment is limited, ensuring that considerable personal attention is given to each student. Faculty members are all practitioners in the professional world of stage and/or screen.

Close contact is maintained with local theatres and studios, and students have an opportunity to experience the workings of these organizations at first hand.

Classes are approximately 35 hours a week for 32 weeks, over two semesters each year.

Major courses include acting (including improvisation, text study, characterisation, scene work, workshop production) voice and speech; mime and dramatic movement; dance (basic ballet and modern stage); vocal music (solo and choral); set design and basic construction; costume design; basic construction and wardrobe operation; performance production for stage and camera; video and radio performance techniques.

Minor courses include make-up for stage and camera; lighting and sound; audio-visual equipment; stage management and production management; career management, history of the theatre; study of scripts and lyrics.

On successful completion of the program students receive a diploma. A third year, more specialized post-diploma course is under consideration.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
THEA	100	Acting I	113.0
THEA	102	Dance I	60.0
THEA	103	Movement & Mime	60.0
THEA	104	Voice & Speech I	45.0
THEA	105	Technical Studies I	42.0
THEA	106	Music (Vocal)	45.0
THEA	107	Play & Script Study	30.0
THEA	108	Costume	60.0
THEA	109	Make-up	15.0
			470.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
THEA	101	Acting II	135.0
THEA	110	Set Design & Construction	120.0
THEA	111	Voice & Speech II	45.0
THEA	112	Production I	64.0
THEA	113	Music II Vocal	90.0
THEA	114	Technical Studies II	38.0
THEA	115	Dance II	45.0
			537.0

Semester 3 — 15 weeks

Course		Course Title	Total Hours
THEA	200	Acting III	130.0
THEA	201	Directing	28.0
THEA	202	TV Production & Performance	60.0
THEA	203	Dance III	90.0
THEA	204	Voice & Speech III	45.0
THEA	205	Radio Technique	16.0
THEA	206	Music III Vocal	45.0
THEA	207	Professionalism I	52.0
THEA	208	Production II	32.0
			498.0

Semester 4 — 17 weeks

Course		Course Title	Total Hours
THEA	209	Professionalism II	34.0
THEA	210	Voice & Speech II	51.0
THEA	211	Music IV Vocal	34.0
THEA	212	Dance IV	51.0
THEA	213	Production III (Performance)	184.0
THEA	214	Production IV (Performance)	184.0
			538.0

Elective

Course		Course Title	Total Hours
ES	102	Instructional Techniques (Optional)	16.0
			16.0

St. James

Business

GBC code: B109

Location: St. James
Length: 5 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics and English in years 3 and 4 at, or above, the general level, or equivalent.

Business today offers a wide choice of interesting, well-paying careers.

There is a growing need for competent, skilled people in accounting, marketing, data processing, physical distribution, insurance, general business and sales positions.

George Brown's Business and Commerce division can give the highly concentrated training needed to enter the specialty area of the student's choice.

The first semester of all the two-year business programs is the same. This provides a broad introduction to business. Subjects include language and communication, business mathematics, introduction to accounting, insurance, data processing, marketing, and physical distribution.

In the second semester, students start to specialize in one of the areas listed below.

Option 1 — Accounting
Option 2 — Electronic Data Processing
Option 3 — Marketing
Option 4 — General
Option 5 — Physical Distribution
Option 6 — Insurance

Graduates of two-year programs may also qualify for a fifth semester in business administration. This program is for those students who, having completed a four semester Business program at George Brown College with a good academic record, desire to proceed into more advanced areas of study in business administration. It integrates the students' more advanced learning into a broader view of an organization as a whole. In addition, students increase their specialized knowledge through research projects in their major fields of study. Advanced decision-making, planning and central skills are developed through the use of modern learning techniques.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	101	Language and Communications	90.0
MATH	114	Business Mathematics	90.0
ACC	100	Introduction to Accounting I	90.0
EDP	100	Introduction to Data Processing	72.0
MARK	100	Introduction to Marketing	90.0
PHD	100	Introduction to Physical Distribution	72.0
INS	100	Principles & Practice of Insurance	36.0
			540.0

Option: 1 Accounting

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
ACC	101	Introduction to Accounting II	180.0
ELECT	000	Elective	90.0
			540.0

Option: 1 Accounting

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
ACC	200	Financial Accounting I	180.0
ACC	201	Management Information Systems	90.0
ACC	202	Cost Accounting I	90.0
ELECT	000	Elective	90.0
			540.0

Option: 1 Accounting

Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
ACC	203	Financial Accounting II	180.0
ACC	204	Cost Accounting II	90.0
ACC	205	Auditing	45.0
ACC	206	Taxation	45.0
ELECT	000	Elective	90.0
			540.0

Option: 2 Electronic Data Processing

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
EDP	101	Cobol I	90.0

EDP	104	Management Information Systems (MIS)	90.0
EDP	103	Programming I	90.0
			540.0

Option: 2 Electronic Data Processing
Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
EDP	200	Cobol II	90.0
EDP	209	Computer Hardware & Systems	90.0
EDP	210	Systems Analysis & Design	90.0
ELECT	000	Elective	90.0
			540.0

Option: 2 Electronic Data Processing
Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
EDP	204	Advanced Programming	90.0
EDP	211	Computer Software & Systems	90.0
EDP	208	Advanced E.D.P. Topics	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 3 Marketing
Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
MARK	101	The Sales Aspect of Marketing	90.0
MARK	102	Advertising and Sales Promotion	90.0
ELECT	000	Elective	90.0
			540.0

Option: 3 Marketing
Semester 3 — 18 weeks

Course		Course Title	Total Hours
Eng	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
MARK	200	Product Planning and Pricing Policies	90.0
MARK	201	Distribution Channels	90.0

MARK	202	Marketing Research and Information	90.0
ELECT	000	Elective	90.0
			540.0

Option: 3 Marketing
Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
MARK	205	Marketing Management I	90.0
MARK	206	Marketing Management II	90.0
MARK	207	Marketing Management III	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 4 General
Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 4 General
Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
PSY	161	Introductory Psychology	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 4 General
Semester 4 — 18 weeks

Course		Course Title	Total Hours
BUS	215	Media Applications	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 5 Physical Distribution
Semester 2 — 18 weeks

Course		Course Title	Total Hours
PHD	102	Physical Distribution Analysis	90.0
PHD	103	Warehousing Management	90.0
PHD	105	Inventory Control I	90.0
BUS	101	Human Relations	90.0
ENG	102	Language & Communications	90.0
ELECT	000	Elective	90.0
			540.0

Option: 5 Physical Distribution
Semester 3 — 18 weeks

Course		Course Title	Total Hours
PHD	202	Physical Distribution Systems — Management I	90.0
PHD	204	Industrial Purchasing	90.0
PHD	203	Traffic & Transportation Management I	90.0
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
ELECT	000	Elective	90.0
			540.0

Option: 5 Physical Distribution
Semester 4 — 18 weeks

Course		Course Title	Total Hours
PHD	205	Physical Distribution Systems — Management I	90.0
PHD	206	Inventory Control II	90.0
PHD	207	Traffic and Transportation Management II	90.0
BUS	215	Media Applications	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			540.0

Option: 6 Business Insurance
Semester 2 — 18 weeks

Course		Course Title	Total Hours
INS	101	Insurance on Property I	90.0
INS	102	Automobile Insurance	90.0
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
BUS	101	Human Relations	90.0
ELECT	000	Elective	90.0
			540.0

Option: 6 Business Insurance
Semester 3 — 18 weeks

Course		Course Title	Total Hours
INS	200	Insurance on Property II	90.0
INS	201	Insurance Against Liability	90.0
INS	202	Loss Adjustments & Claims Settlements	90.0
ENG	201	English & the Business World	90.0
MATH	214	Statistics I	90.0
ELECT	000	Elective	90.0
			540.0

Option: 6 Business Insurance
Semester 4 — 18 weeks

Course		Course Title	Total Hours
INS	205	Property Loss Adjustments	90.0
INS	206	Casualty Covers	90.0
INS	207	Burglary & Fidelity Insurance	90.0
BUS	215	Media Applications	90.0
LAW	200	Business Law I	90.0
ELECT	000	Elective	90.0
			540.0

Option: 7 Business Administration
Semester 5 — 18 weeks

Course		Course Title	Total Hours
BUS	320	Organizational Behavior	90.0
BUS	321	Financial Management	90.0
BUS	322	International Business	90.0
BUS	324	Canadian Business Policy & Strategy	90.0
BUS	325	Faculty Directed Research	90.0
			450.0

Sales GBC code: B142

Location: St. James
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in mathematics and English in years 3 and 4 at, or above, the general level, or equivalent.

Background: The ability to succeed with a minimum of supervision is essential.

The one year Sales program has been developed to assist the aspiring salesperson to develop sales skills.

The study of buying psychology and sales presentation theory followed by video sales

presentations in a business atmosphere with color T.V. playback gives the student unique experience in handling sales calls at the industrial sales level.

During the two semesters of instruction the student obtains an understanding of the sales quotation letter, business letter writing, business mathematics, basic marketing, accounting, human relations and other business functions.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	101	Language and Communications	90.0
MATH	114	Business Mathematics	90.0
BUS	101	Human Relations	90.0
MARK	100	Introduction to Marketing	90.0
ACC	100	Introduction to Accounting I	90.0
PHD	100	Introduction to Physical Distribution	90.0
			540.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	102	Language & Communications	90.0
MATH	115	Business Mathematics	90.0
LAW	200	Business Law I	90.0
MARK	101	The Sales Aspect of Marketing	90.0
MARK	201	Distribution Channels	90.0
ELECT	000	Elective	90.0
			540.0

Secretarial Arts GBC code: B105

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. A written English test may be administered to applicants and a passing grade of 65% is required.

All students who wish to pursue programs in general-executive, legal or medical secretarial arts take a common first year of introductory and general background courses. The main purpose is to provide the student with a solid foundation in secretarial skills.

Toward the end of first year, the student decides which course of study to pursue. These are described on the following pages as:

Option 1 — General Executive
Option 2 — Legal
Option 3 — Medical

Each of these programs provides intensive study in the major subject area for an additional two semesters and provides a 2-year secretarial diploma.

Program Route: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	101	Language and Communications	90.0
MATH	113	Business Mathematics	54.0
OP	100	Typewriting & Office Practice	126.0
SH	100	Shorthand Pitman or Machine	180.0
ELECT	000	Elective	90.0
			540.0

Semester 2 — 18 weeks

Toward the end of the first year the student will decide which course of study to pursue.

Course		Course Title	Total Hours
ENG	104	Business Communication	90.0
OP	101	Typewriting & Office Practice	180.0
SH	101	Shorthand Pitman or Machine	180.0
ELECT	000	Elective	90.0
			540.0

Option: 1 General Executive

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
ACC	212	Secretarial Accounting (Introductory)	54.0
SH	200	Shorthand	180.0
OP	200	Secretarial Procedures	180.0
BUS	100	Business Organization	36.0
			540.0

Option: 1 General Executive

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
LAW	205	Business Law	54.0
SH	201	Applied Stenography	180.0
OP	201	Secretarial Practice & Word Processing	180.0
DIC	205	Dictaphone	36.0
			540.0

Option: 2 Legal

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
LAW	202	Business Law	90.0
OP	202	Legal Office Practice	90.0
SH	202	Legal Shorthand	180.0
BUS	233	Word Processing and Dicta	90.0
			540.0

Option: 2 Legal

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
LAW	203	Business Law	90.0
OP	203	Legal Office Practice	90.0
SH	203	Legal Shorthand	126.0
ACC	215	Legal Accounting (Introductory)	54.0
BUS	234	Word Processing and Dicta	90.0
			540.0

Option: 3 Medical

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
OP	204	Medical Office Practice	90.0
SH	204	Medical Shorthand	180.0
ANAT	201	Anatomy & Physiology (Medical Terminology-I)	90.0
DIC	201	Medical Typing and Dicta	90.0
			540.0

Option: 3 Medical

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
OP	205	Medical Office Practice	90.0
SH	205	Medical Shorthand	126.0
ANAT	202	Anatomy & Physiology (Medical Terminology-II)	90.0
ACC	214	Medical Accounting (Introductory)	54.0
DIC	202	Medical Typing Dicta and Word Processing	90.0
			540.0

Medical Dicta-Typing GBC code: B143

Location: St. James
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. A written English test may be administered to applicants and a passing grade of 65% is required.

Background: Applicants must have a minimum typing speed of 45 W.P.M.

A one-year Medical Dicta - Typing program is offered to those who already have a minimum typing speed of 45 W.P.M. and who do not want shorthand in their program. It is a certificate course as opposed to the two-year diploma program which has shorthand.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	201	English & the Business World	90.0
OP	204	Medical Office Practice	90.0
DIC	200	Medical Dictaphone	180.0
ANAT	201	Anatomy & Physiology (Medical Terminology-I)	90.0
DIC	202	Medical Typing Dicta and Word Processing	90.0
			540.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	204	Business Communication	90.0
OP	205	Medical Office Practice	90.0
DIC	201	Medical Typing and Dicta	126.0
ANAT	202	Anatomy & Physiology (Medical Terminology-II)	90.0
ACC	214	Medical Accounting (Introductory)	54.0
DIC	203	Medical Dictaphone & Word Processing	90.0
			540.0

Court Reporting (Stenographic) GBC code: B441

Location: St. James
Length: 2 Semesters
Certification: Certificate
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4, including English, at or above the general level, or equivalent. Applicants may be required to take a written English test with a required passing grade of 65%.

Shorthand speed (Pitman or machine) of 120

w.p.m. on straight matter for five minutes and 45 w.p.m. in typewriting. Applicants may be required to demonstrate this proficiency. Those who meet the shorthand requirements will continue their reporting studies in the shorthand system in which they have qualified.

Background: A high degree of manual dexterity and communication skill is strongly recommended. Related business experience, or successful completion of a recognized legal secretarial arts program, would be beneficial.

This is an intensive program in reporting skills which will prepare the student for employment in the court reporting field. The course of study, as well as covering many other areas, includes actual experience in the courts working with an experienced court reporter. The Chartered Shorthand Reporters' Association examination can be written on completion of the course.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	401	English and the Legal World	54.0
BUS	407	Legal Medical and General Terminology	90.0
BUS	408	Court Procedures	90.0
BUS	409	Current Events	36.0
SH	402	Shorthand & Transcription Pitman or Machine	270.0
			540.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	404	English and the Legal World	54.0
BUS	412	Legal Medical and General Terminology	90.0
BUS	411	Field Work in the Courts	90.0
BUS	410	Current Events	36.0
SH	403	Shorthand & Transcription Pitman or Machine	270.0
			540.0

Stenomask GBC code: B144

Location: St. James
Length: 2 Semesters
Certification: Certificate

Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. An interview is required.

Background: Prior knowledge of typewriting is useful but not essential.

Stenomask reporting is an alternative to shorthand for recording court proceedings which are later transcribed into typewritten form. Using stenomask equipment, the court reporter repeats what is being said into a "Mask" which is attached into a recording device. A speed of up to 250 words per minute is required.

Students will follow the same program of study as in the regular Court Reporting program, except that they will develop their recording skills on the stenomask rather than in shorthand.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ENG	105	English & the Legal World	54.0
BUS	110	Legal, Medical & General Terminology	90.0
BUS	111	Court Procedures	90.0
BUS	112	Current Events	36.0
SH	102	Stenomask & Transcription	270.0
			540.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ENG	106	English & the Legal World	54.0
BUS	113	Legal, Medical & General Terminology	90.0
BUS	114	Fieldwork in the Courts	90.0
BUS	115	Current Events	36.0
SH	103	Stenomask & Transcription	270.0
			540.0

Construction Management GBC code: B11
— Residential

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary Schol Graduation Diploma with credits in mathematics and English in years 3 and 4 at above, the general level, or equivalent.

This program is designed to provide grates who can qualify for management or supervisory positions in the residential construction industry. This is a specialized fie that differs significantly from general constru tion. Will include construction techniques business management, finance, law, huma resources management, business communica tion and government relations.

PROGRAM ROUTE: 1

Semester 1 — 18 weeks

Course		Course Title	Total Hours
ARDR	100	BPR & Elementary Drafting	54.0
CO	110	Building Construction	54.0
CO	111	Materials of Construction	54.0
CO	112	Contracts, Specifications & Codes	54.0
SURV	103	Quantity Surveying & Estimating	54.0
BUS	107	Small Business Management	90.0
ENG	112	Business Communication	45.0
MARK	103	Introduction to Marketing Management	45.0
			450.0

Semester 2 — 18 weeks

Course		Course Title	Total Hours
ARDR	101	Architectural Drafting	54.0
CO	110	Building Construction	54.0
CO	111	Materials of Construction	54.0
CO	112	Contracts, Specifications & Codes	54.0
SURV	103	Quantity Surveying & Estimating	54.0
BUS	109	Job Site Management I	90.0
BUS	212	Human Resources Management	90.0
MARK	104	Salesmanship	45.0
			495.0

Semester 3 — 18 weeks

Course		Course Title	Total Hours
CO	211	Construction Project Scheduling	45.0
CO	212	Building Construction	45.0
SURV	205	Quantity Surveying & Estimating	45.0
SURV	206	Elementary Surveying — Theory	45.0
ARDR	200	Design & Planning	45.0
BUS	200	Job Site Management II	45.0
LAW	208	Law I Canadian Business Law	45.0
LAW	209	Law II Law of Real Estate	45.0
BUS	216	Business — Government Relations	45.0
BUS	217	Purchasing & Inventory Control	45.0
			450.0

Semester 4 — 18 weeks

Course		Course Title	Total Hours
ARDR	201	Final Design Project	36.0
SURV	207	Elementary Surveying — Legal	36.0
CO	213	Mechanical-Electrical Services-Electrical	36.0
CO	214	Mechanical-Electrical Services-Plumbing	36.0
CO	215	Mechanical-Electrical Services-Heating	36.0
BUS	219	Law III Real Estate & Development	45.0
BUS	202	Promotional Management I	45.0
BUS	203	Promotional Management II	45.0
BUS	204	Urban Development Policy Strategy	45.0
BUS	221	Financial Management	45.0
			405.0

Property Management GBC code: B114
— Residential

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above, the general level, or equivalent. All applicants are interviewed by a professional property manager.

Background: Credits in bookkeeping and business mathematics would be useful as background.

The curriculum of this program was developed by leaders of the property management industry and is intended to prepare candidates for certification in the public and private sectors. Emphasis will be placed on sound business administration, marketing, accounting, law, personnel management and insurance, purchasing and inventory control, security and safety, resident relations, maintenance and housekeeping.

Lectures, case studies and practical on-site assignments will be provided to enable the student to deal effectively with day to day property management problems. This full-time program includes college-supervised work experience under qualified managers.

Graduates are eligible for professional certification by the Housing and Urban Development Association of Canada and the Social Housing Institute.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
HOUS	111	Housekeeping	60.0
ACC	111	Accounting	45.0
SEC	111	Security and Safety	30.0
MAIN	111	Maintenance	105.0
LAW	111	Law	30.0
ENG	110	Language & Communications	45.0
MATH	101	Mathematics	30.0
URB	100	Urban Studies	30.0
PROP	100	Introduction to Property Management	30.0
			405.0

Semester 2 — 17 weeks

Course		Course Title	Total Hours
HOUSE	111	Housekeeping	68.0
INV	111	Purchasing and Inventory Control	34.0
ACC	111	Accounting	34.0
SEC	111	Security and Safety	34.0
REL	111	Resident Relations	34.0
MAIN	111	Maintenance	68.0
LAW	111	Law	34.0
ENG	111	Language & Communications	51.0
MATH	101	Mathematics	34.0
URB	100	Urban Studies	34.0
PSY	102	Introductory Psychology	34.0
			459.0

Semester 3 — 15 weeks

Third semester includes one week work experience in industry.

Course		Course Title	Total Hours
MARK	211	Advertising & Sales Promotion	45.0
ACC	213	Accounting	30.0
INS	211	Insurance	45.0
REL	211	Resident Relations	30.0
PERS	211	Personnel Management	30.0
PROP	211	Amenity & Common Area Management	30.0
LAW	211	Law	30.0
PRAC	111	Management Practice	75.0
PROP	200	Condominium Management	30.0
PSY	103	Business Psychology	30.0
			375.0

Semester 4 — 17 weeks

Fourth semester includes two weeks work experience in industry.

Course		Course Title	Total Hours
MARK	211	Advertising & Sales Promotion	51.0
ACC	213	Accounting	34.0
INS	211	Insurance	34.0
PERS	211	Personnel Management	34.0
PROP	211	Amenity & Common Area Management	34.0
LAW	211	Law	34.0
PRAC	211	Management Practice	85.0
PROP	200	Condominium Management	34.0
PROJ	200	Research Project	75.0
			415.0

Acoustics Technician GBC code: EL104

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics or equivalent.

Background: Credits in physics, drafting and electricity/electronics are desirable.

The acoustics technician program provides a thorough grounding in principles of acoustic design, sound analysis and modern practice of noise control and hearing conservation. Students are trained in well-equipped laboratories in the operation of professional and industrial instruments used for sound and vibration measurement and analysis for audio-metric screening and audio reproduction.

Application has been made for certification of graduates by the Ontario Association of Certified Engineering Technicians and Technologists.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
ELTC	108	AM/FM Receivers	27.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			435.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	103	Amplifiers and Devices	50.0
ELTC	111B	Applied Circuit Analysis II	28.0
ELTC	203	Computer Aided Design	28.0
ENG	100	Language and Communications	28.0
BUS	101	Human Relations	42.0
ELTC	112B	Laboratory	112.0
ELDR	121	Drafting Fundamentals	28.0
ELTC	210	Digital Principles	70.0
INST	108	Instrumentation Fundamentals	42.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELDR	121A	Drafting Fundamentals (Tutorial)	28.0
			49.0

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ELTC	108	AM/FM Receivers	36.0
ACOU	200	Environmental Acoustics	91.0
ACOU	201A	Sound and Vibration Analysis	52.0
ACOU	211A	Noise Control I	45.0
ACOU	213A	Acoustics Laboratory	88.0
ACOU	214A	Acoustic Systems Design	90.0
ELTC	211	Audio Principles	54.0
ELTC	218	Electronic Systems and Measurements	52.0
MATH	201	Mathematics	54.0
ENG	200	Language and Communications	36.0
ELTC	217	Electronic Laboratory	56.0
			609.0

Semester 4 — 20 weeks

Course		Course Title	Total Hours
ACOU	201	Sound and Vibration Analysis	100.0
ACOU	211B	Noise Control II	100.0
ACOU	213B	Acoustics Laboratory	180.0
ACOU	214B	Acoustic Systems Design	100.0
MATH	202	Mathematics	80.0
ENG	200	Language and Communications	40.0
BUS	100	Business Organization	60.0
ELTC	299	Technical Report	60.0
			660.0

Electronics Technician GBC code: EL103

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in year 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent

Background: Credits in physics, drafting, electricity/electronics, mechanics, chemistry and computer programming would be a useful background. The technician is usually working with the customer; therefore, an ability to work with and to communicate effectively with others is most essential.

The Electronics Technician program provides both men and women with the opportunity to work in the maintenance, installation, production, design or research phases of the electronics industry. In order to better qualify the graduate for immediate productive work in industry, the program has been designed so that in the second year the student specializes in one of the following areas: communications, computers, ETV/TV broadcast. Graduates of this program are now employed in research and engineering departments of government and industry, in utility companies, in radio and television broadcasting, in closed circuit television studios, in the oil industry, and in the installation of computer and communications systems. Graduates have the academic qualifications acceptable to the Ontario Association of Certified Engineering Technicians and Technologists for certification as a Senior Engineering Technician.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0

ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			435.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	103	Amplifiers and Devices	50.0
ELTC	111B	Applied Circuit Analysis II	28.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	203	Computer Aided Design	28.0
ENG	100	Language and Communications	28.0
BUS	101	Human Relations	42.0
ELTC	112B	Laboratory	112.0
ELDR	121	Drafting Fundamentals	28.0
ELTC	210	Digital Principles	70.0
INST	108	Instrumentation Fundamentals	42.0
ELDR	121A	Drafting Fundamentals (Tutorials)	28.0
			490.0

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ELTC	108B	AM/FM Receivers Part II	36.0
ELTC	207	Advanced Semi-Conductors Devices	66.0
ELTC	208	Pulse Circuits	66.0
ELTC	209	Laboratory	162.0
ELTC	211	Audio Principles	54.0
ELTC	212	Video Principles	54.0
MATH	201	Mathematics	54.0
ENG	200	Language and Communications	36.0
ELTC	105	TV Principles	48.0
			576.0

Semester 4 — 20 weeks

Course		Course Title	Total Hours
ELTC	210	Digital Principles	72.0
ELTC	209B	Laboratory	160.0
MATH	202	Mathematics	80.0
MECH	202	Mechanisms	60.0
ELTC	299	Technical Report	
ENG	200	Language and Communications	40.0
BUS	100	Business Organization	60.0
ELTC	213	Communication Principles	72.0
ELECT	000	Elective	96.0
			640.0

Choose 1 of the Following 3

Course		Course Title	Total Hours
ELTC	215	Communications Systems	96.0
ELTC	216	Computer Systems	96.0
ELTC	219	ETV/TV Broadcast Maintenance Systems	96.0

Electronics Technologist GBC code; EL105

Location: St. James
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics or equivalent.

Background: Credits in physics, chemistry, drafting, electricity/electronics, mechanics and computer programming at level 4 and mathematics at level 5 would be useful background.

This coeducational program was developed to meet the needs of industry for engineering technologists with a practical and theoretical knowledge who will be able to work effectively in the many areas of electronics. Technologists usually work on their own initiative, but under the general supervision of an engineer, a scientist or senior technologist. This program provides the student with a knowledge of advanced electronics based on quantitative analysis of electronic circuits and systems. Graduates may be employed in many fields: design and construction of equipment/ maintenance, repair, and installation of systems (computers, communication); quality control management; marketing and research. Because of the depth of knowledge required by the technologist, the College will review the student's progress at the end of the first semester to determine suitability for further technology training. Those not qualifying, may be transferred to the Electronics Technician program. Graduates of the technology program have academic qualifications acceptable to the Ontario Association of Certified Engineering Technicians and Technologists for certification as an Engineering Technologist.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102C	Electronic Fundamentals — Advanced	52.0
ELTC	103T	Amplifiers & Devices	91.0
ELTC	104A	Advanced Transistors	39.0
ELTC	111T	Laboratory	14.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	112T	Laboratory	98.0
ENG	100	Language and Communications	28.0
MATH	102T	Mathematics	42.0
BUS	101	Human Relations	42.0
ELDR	121	Drafting Fundamentals	28.0
			448.0

Semester 3 — 14 weeks

Course		Course Title	Total Hours
ELTC	104B	Advanced Transistors	28.0
ELTC	200	AM/FM Receiver Technology	70.0
ELTC	201	Wave Shaping and Control Devices	70.0
ELTC	202A	Logic Systems Part I	28.0
ELTC	221A	Laboratory	84.0
MATH	201T	Mathematics	70.0
PHY	201T	Modern Physics	42.0
ENG	200	Language and Communications	28.0
			420.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
ELTC	202B	Logic Systems Part II	36.0
ELTC	203T	Computer Aided Design	48.0
ELTC	302	Computer Technology	78.0
ELTC	205	Communications Technology I	78.0
ELTC	304	System Design Principle (Tutorial)	16.0
ELTC	221B	Laboratory	112.0
MATH	202	Mathematics	80.0
PHY	202T	Modern Physics	48.0
ENG	200	Language and Communications	32.0
			528.0

Semester 5 — 17 weeks

Course		Course Title	Total Hours
ELTC	204	Solid State Operational Amplifier Design	80.0
ELTC	300	Pulse Technology	64.0
ELTC	309A	Laboratory	119.0
ENG	300	Report Writing	34.0
MATH	301	Mathematics	68.0
ELTC	310	Advanced Circuit Analysis	32.0
ELTC	304B	Systems Design Principles Part II	68.0
ELTC	305	Electronic Mechanical Design Principles	32.0
			497.0

Semester 6 — 14 weeks

Course		Course Title	Total Hours
ELTC	301	Communications Technology II	70.0
ELTC	303	Automatic Controls Systems	84.0
ELTC	309B	Laboratory	98.0
BUS	300	Business Organization	42.0
MECH	302T	Mechanic and Mechanisms	56.0
ELTC	399	Technology Report	
ELTC	306	Component Technology	42.0
			392.0

Industrial Instrumentation GBC code: EN101
Technician

Location: St. James
Length: 4 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics, or equivalent.

Background: Credits in physics, drafting, electricity/electronics, mechanics, chemistry and computer programming would be a useful background. The technician is usually working with the customer; therefore, an ability to communicate effectively with others is most essential.

The instrumentation technician works in all phases of industry using automatic controls. Job opportunities range from positions in

research and development to sales and service for instrument manufacturers.

Each instruction period is followed by one or more laboratory periods to reinforce theory. The student is given a sound grounding in pneumatic instrumentation, electronic instrumentation, computers and related academic subjects.

Graduates have technical and academic qualifications acceptable to the Ontario Association of Certified Engineering Technicians and Technologists for certification.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	109	Introduction to Motors & Generators	27.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			435.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102B	Electronic Fundamentals Advanced	20.0
ELTC	103	Amplifiers and Devices	50.0
ELTC	111B	Applied Circuit Analysis II	28.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	203	Computer Aided Design	28.0
ENG	100	Language and Communications	28.0
BUS	101	Human Relations	42.0
ELTC	112B	Laboratory	112.0
ELDR	121	Drafting Fundamentals	28.0
ELTC	210	Digital Principles	70.0
INST	108	Instrumentation Fundamentals	42.0
ELDR	121A	Drafting Fundamentals (Tutorial)	28.0
			490.0

Semester 3 — 18 weeks

Course		Course Title	Total Hours
ELTC	108B	AM/FM Receivers Part II	36.0
ELTC	207	Advanced Semi-Conductors Devices	66.0
INST	101	Electronic Instrumentation	66.0
INST	100	Measuring Principles	48.0
INST	102	Piping & Construction Techniques	36.0
INST	209A	Laboratory	85.0
MATH	200	Mathematics	54.0
ENG	200	Language and Communications	36.0
CHEM	100	Applied Chemistry	48.0
ELTC	209A	Laboratory	76.0
			551.0

Semester 4 — 20 weeks

Course		Course Title	Total Hours
INST	200	Automatic Control Principles	72.0
INST	202	Analytical & Environmental Instrumentation	60.0
BUS	100	Business Organization	60.0
MATH	200	Mathematics	80.0
ELTC	210	Digital Principles	72.0
ENG	200	Language and Communications	40.0
INST	201	Final Control Elements	36.0
INST	209B	Laboratory	120.0
ELTC	209B	Laboratory	60.0
CHEM	200	Industrial Chemistry & Equipment	34.0
INST	299	Technical Report	20.0
			634.0

Industrial Instrumentation GBC code: EN114
Technologist

Location: St. James
Length: 6 Semesters
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level including year 4 mathematics and English and year 3 physics or equivalent.

Background: Credits in physics, drafting, electricity/electronics, mechanics and computer programming at level 4 and mathematics level 5 would be useful. Year 4 chemistry is highly recommended.

The instrumentation technologist works mainly in design and systems modification. Job opportunities range from challenging positions in research and development to sales and service for instrument manufacturers.

The Industrial Instrumentation Technology program gives a six semester program in two years.

Each instruction period is followed by one or more laboratory periods to reinforce theory. The student is given a firm grounding in electronic instrumentation, pneumatic instrumentation, computer technology and related academic subjects.

Graduates have technical and academic qualifications acceptable to the Ontario Association of Certified Engineering Technicians and Technologists for certification.

PROGRAM ROUTE: 1

Semester 1 — 15 weeks

Course		Course Title	Total Hours
ELTC	109	Introduction to Motors & Generators	27.0
INST	108	Instrumentation Fundamentals	45.0
ELTC	110	Introduction to Electrical/Electronics	27.0
ELTC	101	Electrical Fundamentals Advanced	50.0
ELTC	102A	Electronic Fundamentals Advanced	31.0
ELTC	111A	Applied Circuit Analysis	45.0
ELTC	111L	Applied Circuit Analysis Laboratory	15.0
ELTC	112A	Laboratory	135.0
ELDR	120	Drafting Fundamentals	45.0
ENG	100	Language and Communications	30.0
ELDR	120A	Drafting Fundamentals (Tutorial)	30.0
			480.0

Semester 2 — 14 weeks

Course		Course Title	Total Hours
ELTC	102C	Electronic Fundamentals — Advanced	52.0
ELTC	103T	Amplifiers & Devices	91.0
ELTC	104A	Advanced Transistors	39.0
ELTC	111T	Laboratory	14.0
ELTC	111L	Applied Circuit Analysis Laboratory	14.0
ELTC	112T	Laboratory	98.0
ENG	100	Language and Communications	28.0
MATH	102T	Mathematics	42.0
BUS	101	Human Relations	42.0
ELDR	121	Drafting Fundamentals	28.0
ELDR	121A	Drafting Fundamentals (Tutorial)	28.0
			476.0

Semester 3 — 14 weeks

Course		Course Title	Total Hours
ELTC	104B	Advanced Transistors	28.0
ELTC	200	AM/FM Receiver Technology	70.0
ELTC	201	Wave Shaping and Control Devices	70.0
ELTC	202A	Logic Systems Part I	28.0
ELTC	221A	Laboratory	84.0
MATH	201T	Mathematics	70.0
PHY	201T	Modern Physics	42.0
ENG	200	Language and Communications	28.0
			420.0

Semester 4 — 16 weeks

Course		Course Title	Total Hours
ELTC	202B	Logic Systems Part II	36.0
INST	101T	Electronic Instrumentation	36.0
INST	221B	Laboratory	112.0
MATH	202	Mathematics	80.0
PHY	202T	Modern Physics	48.0
CHEM	100	Applied Chemistry	48.0
ENG	200	Language and Communications	32.0
ELTC	203T	Computer Aided Design	48.0
ELTC	302	Computer Technology	78.0
INST	100T	Measuring Principles	42.0
			560.0

Semester 5 — 17 weeks

Course		Course Title	Total Hours
INST	202	Analytical & Environmental Instrumentation	60.0
INST	200T	Automatic Control Principles	56.0
INST	201T	Final Control Elements	48.0
INST	309A	Laboratory	84.0
MATH	301	Mathematics	68.0
ELTC	204	Solid State Operational Amplifier Design	80.0
ELTC	310	Advanced Circuit Analysis	32.0
CHEM	200	Industrial Chemistry & Equipment	34.0
ENG	300	Report Writing	34.0
			496.0

Semester 6 — 14 weeks

Course		Course Title	Total Hours
INST	302	Systems Design and Construction	84.0
INST	304	Telemetering	28.0
INST	309B	Laboratory	56.0
ELTC	309B	Laboratory	42.0
ELTC	303	Automatic Controls Systems	84.0
BUS	300	Business Organization	42.0
MECH	302	Mechanics & Mechanisms	56.0
INST	399	Technical Report	20.0
			392.0

Graphics Arts GBC code: G101
Printing Technician

Location: St. James
Length: 3 Years
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 or equivalent.

Background: Drafting skills, mechanical aptitude, typing skills, artistic interests are all useful in various parts of the trade.

The printing industry is one of the largest employers in the Toronto area, which in turn is known as a centre of superior quality printing companies. Several years ago, a survey of the industry indicated a real need for highly trained technicians to permit the industry to expand.

The Printing Technology department has the most modern presses, photocomposition equipment, process cameras, electronic colour scanners, stripping, platemaking and bindery equipment.

Technicians in the 3-year program take "hands-on" technical training in eight major areas for each of the first two years and then select one area, such as presswork, photocomposition, camera and stripping or bindery in which to specialize in the third year.

Graphic Arts Printing Technician technical courses are presented in a block system. Each technical course requires one block during the academic year. A block is 20 actual successive days totalling 80 technical hours. Academic courses are presented simultaneously totalling 9 hours per week.

Options: Typographic Composition
Camera & Stripping
Machine Printing
Bindery

Program Route: 1

Year 1 — 38 weeks

Note: Students must either type or be prepared to take a 20 hour lumisonic typing course in the first year.

Course		Course Title	Total Hours
GR	100	Layout Design Typography	80.0
GR	101	Hot Metal Composition	80.0
GR	105	Photomechanical Reproduction	80.0
GR	110	Film Imposition & Printing Preparation	80.0
GR	114	Machine Printing (Letterpress)	80.0
GR	115	Machine Printing (Basic Offset)	80.0
GR	116	Machine Printing (Offset)	80.0
GR	125	Bindery	80.0
PHY	105	Physics	60.0
MATH	105	Mathematics	120.0
ENG	100	Language and Communications	80.0
CHEM	105	Chemistry	60.0
			960.0

Year 2 — 38 weeks

Course		Course Title	Total Hours
GR	202	Photocomposition Keyboard Tape Film	80.0
GR	205	Photomechanical Reproduction	80.0
GR	210	Film Imposition Printing Surface Preparation	80.0
GR	214	Machine Printing (Flexo)	80.0
GR	215	Machine Printing (Rotogravure)	80.0
GR	216	Machine Printing (Offset)	80.0
GR	217	Machine Printing (2 Color Offset)	80.0
GR	225	Bindery	80.0
GR	220	Quality Control	80.0
GR	250	Electronics	80.0
MATH	205	Mathematics	80.0
ENG	200	Language and Communications	80.0
			960.0

In year 3 students will select the area in which they wish to specialize by choosing one of the following four options — typographic composition, camera & stripping, machine printing or bindery. Students in any option will take all the courses listed for that option together with four electives. Of the four electives two will be courses from other option areas and two will be courses from the list of business courses which is shown at the end of the program profile.

Option: 1 Typographic Composition

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	300	Typographic Design and Layout	80.0
GR	301	Computer Peripherals and Typesetting	80.0
GR	302	Paste-up and Film Assembly	80.0
GR	303	Photocomposition Tape Input	80.0
GR	304	Advance Keyboard Techniques	80.0
GR	322	Cold Type Mark-up	80.0
GR	350	Graphic Arts Administration Processes	40.0
GR	351	Technical Report Writing	60.0
ES	100	Effective Supervision	40.0
ED	100	Teaching Techniques	40.0
ELECT	000	Elective	90.0
ELECT	000	Elective	80.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			1000.0

Option: 2 Camera & Stripping

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	305	Photomechanical Reproduction	80.0
GR	306	Photomechanical Reproduction	80.0
GR	307	Photomechanical Reproduction — Gravure	40.0
GR	308	Photomechanical Reproduction — Scanner	40.0
GR	310	Film Imposition and Printing Preparation	80.0
GR	311	Film Imposition and Printing Preparation	80.0
GR	312	Film Imposition and Printing Preparation	80.0
GR	350	Graphic Arts Administration Processes	40.0
GR	351	Technical Report Writing	60.0
ES	100	Effective Supervision	40.0
ED	100	Teaching Techniques	40.0
ELECT	000	Elective	90.0
ELECT	000	Elective	80.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
			1000.0

Option: 3 Machine Printing

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	314	Die Cutting & Embossing	80.0
GR	316	Machine Printing Two-colour Offset Press Adv	80.0
GR	317	Machine Printing Rotogravure Adv	80.0
GR	318	Machine Printing Flexo Adv	80.0
GR	319	Multi-colour Press Projects	80.0
GR	320	Process Colour Press Projects	80.0
GR	350	Graphic Arts Administration Processes	40.0
GR	351	Technical Report Writing	60.0
ES	100	Effective Supervision	40.0
ED	100	Teaching Techniques	40.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	80.0
ELECT	000	Elective	80.0
			1000.0

Option: 4 Bindery

Year 3 — 38 weeks

Course		Course Title	Total Hours
GR	325	Bindery — Guillotine & 17X22 Baumfolder	80.0
GR	326	Bindery — Gathering & Adhesive Binding	80.0
GR	327	Bindery Advanced Folding 26X40 Baum	80.0
GR	328	Bindery Stitching Machines	80.0
GR	329	Bindery & Sewing Machines	80.0
GR	330	Bindery Foil Stamping & Casing in Machine	80.0
GR	350	Graphic Arts Administration Processes	40.0
GR	351	Technical Report Writing	60.0
ES	100	Effective Supervision	40.0
ED	100	Teaching Techniques	40.0
ELECT	000	Elective	90.0
ELECT	000	Elective	90.0
ELECT	000	Elective	80.0
ELECT	000	Elective	80.0
			1000.0

Choose 2 of the following 25 Electives — Business & Commerce

Course		Course Title	Total Hours
ACC	102	Principles of Accounting	90.0
BUS	100	Business Organization	90.0
BUS	102	Advertising	90.0
BUS	103	Finance	90.0
BUS	104	Government Administration	90.0
BUS	107	Small Business Management	90.0
BUS	108	The Psychology of Buyer Acceptance	90.0
ANAT	120	Introductory Anatomy and Physiology	90.0
BUS	130	Financial Markets	90.0
BUS	131	Retail Merchandising	90.0
BUS	140	Canadian Studies	90.0
BUS	211	Human Resources Development	90.0
BUS	212	Human Resources Management	90.0
BUS	324	Canadian Business Policy & Strategy	90.0
BUS	325	Faculty Directed Research	90.0
EDP	103	Programming I	90.0
EC	210	Economics I	90.0
EC	211	Economics II	90.0
FR	100	Conversational French	90.0
FR	101	Conversational French Advanced	90.0

MATH	215	Statistics II	90.0
PSY	161	Introductory Psychology	90.0
PSY	162	Advanced Psychology	90.0
TYP	152	Advanced Typing	90.0
TYP	900	Lumisonic Typing	90.0

Graphic Design Technician GBC code: G102

Location: St. James
Length: 2 Years (3rd Year Optional)
Certification: Diploma after 4 semesters — Special certificate for semesters 5 and 6.
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at or above the general level, or equivalent. All applicants must submit a portfolio of five to ten samples and pass an art test.

Background: Credits in art from secondary school or previous training in industry or art college are desirable.

The objective of the two-year graphic design program is to graduate technicians who can create designs of the highest professional quality, and produce finished art for printing, T.V. commercials and all aspects of advertising.

During the first year, the student is encouraged to improve natural skills, to develop techniques, to research proects, to be creative, and to be aware of the suitability of work for reproduction. In the second year the student is required to assemble under studio conditions a complete portfolio of sample work ranging from design sketches to finished art and printed pieces. Students taking the optional third year may specialize in an area they wish to pursue upon graduation.

PROGRAM ROUTE: 1

Year 1 — 38 weeks

Course		Course Title	Total Hours
GD	100	Still Life Drawing	120.0
GD	101	Life Drawing	120.0
GD	102	Lettering	120.0
GD	103	Design	240.0
GD	104	Science of Colour	80.0
GD	105	Museum Techniques	120.0
GD	106	Mechanicals	120.0
GD	107	History of Art	120.0
GD	108	Illustration Techniques	120.0
GD	109	Typographical Design	120.0
			1280.0

Year 2 — 38 weeks

Course		Course Title	Total Hours
GD	201	Illustration	120.0
GD	202	Corporate Design	120.0
GD	204	Printmaking	120.0
GD	205	TV Graphics	120.0
GD	207	History of Art	40.0
GD	209	Life Drawing	120.0
GD	211	Studio Graphics	240.0
GD	212	Advertising Design	200.0
GD	213	Photographic Design	120.0
			1200.0

Year 3 — 38 weeks

Optional 3rd Year.
In the optional 3rd year, the student will choose the area in which he wishes to specialize from among the eight subject areas listed below. In consultation with the faculty of the division, courses will be selected from these subject areas to a total of 30 hrs a week. In all subject areas, except printmaking and photographic design, 3, 6, 9, 12, 15 or 18 hours a week may be selected. In printmaking and photographic design, the selection is limited to 3 or 6 hours. A variety of combinations is available within the overall total of 30 hours a week.

Course		Course Title
GD	302	Illustration
GD	303	Printmaking
GD	304	Package Design
GD	305	TV Graphics
GD	306	Advertising Design
GD	307	Photographic Design
GD	308	Studio Graphics
GD	309	Corporate Design

Diploma Nursing Program GBC code: NU101

Location: St. James
Length: 2 Years
Certification: Diploma
Prerequisites: Ontario Secondary School Graduation Diploma with credits in years 3 and 4 at, or above the general level, or equivalent with a minimum of two credits in science in years 3 and 4.

A pre-interview questionnaire, initial health questionnaire, work reference where applicable, academic pretest and personal interview are also required.

The aim of this program is to prepare diploma nurses to practise nursing in the province of Ontario and to write the Ontario Nurse Registration Examinations.

It extends over two years and consists of 45 weeks of classes and clinical experience plus seven weeks vacation, each year. The curriculum combines both nursing and general education courses. In second year there is one elective — students may choose one of several sociology courses.

PROGRAM ROUTE: 1

Year 1 — 45 weeks

Course		Course Title	Total Hours
NURS	101	Nursing Level I	80.0
NURS	102	Nursing Level I (Lab-Theory)	122.0
NURS	103	Nursing Level II	182.0
NURS	104	Nursing Level II (Lab-Theory)	70.0
NURS	105	Nursing Level III	280.0
NURS	106	Nursing Level III (Lab-Theory)	75.0
BIO	101	Biological Sciences "A"	135.0
HUMN	101	Humanities "A"	60.0
PATH	101	Pathophysiology & Therapeutic Interventions "A"	100.0
PSY	101	Psychology	80.0
SOC	101	Sociology	45.0
			1229.0

Year 2 — 45 weeks

Course		Course Title	Total Hours
NURS	201	Maternity and Newborn Nursing	154.0
NURS	202	Maternity and Newborn Nursing (Lab-Theory)	40.0
NURS	203	Medical-Surgical Nursing of Adults	154.0
NURS	204	Medical-Surgical Nursing Adults (Lab-Theory)	40.0
NURS	205	Medical-Surgical Nursing of Children	154.0
NURS	206	Medical-Surgical Nursing Children Lab-Theory	40.0
NURS	207	Psychiatric Nursing	154.0
NURS	208	Psychiatric Nursing (Lab-Theory)	40.0
NURS	209	Nursing Level V	245.0
NURS	210	Nursing Level V (Lab-Theory)	15.0
BIO	201	Biological Sciences "B"	25.0
HUMN	201	Humanities "B"	40.0
PATH	201	Pathophysiology & Therapeutic Interventions "B"	25.0
PATH	202	Pathophysiology & Therapeutic Interventions "C"	25.0
PATH	205	Psychopathology and Therapeutic Interventions	25.0
ELECT	000	Elective	30.0
			1206.0

Registered Nurse — Critical Care GBC code: NU400

Location: Nightingale
Length: 19 Weeks
Certification: Certificate
Prerequisites: Registration as a nurse in the province of Ontario; one year's nursing experience within the past 3 years.

By utilizing a holistic approach, this program prepares the registered nurse to care for the critically-ill patient with additional competence. Supervised clinical practice is selectively correlated with in-depth theory. Classes are accepted twice annually; in February and in August.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
CCCN	400	Current Concepts	20.0
HBE	400	Human Behavior Ethics and Legal Implication	20.0
ANT	400	Advanced Nursing Theory Critical Conditions	160.0
OM	400	Organization and Management	40.0
ACP	400	Advanced Clinical Practice	260.0
			500.0

Registered Nurse — Operating Room GBC code: NU401

Location: Nightingale
Length: 19 Weeks
Certification: Certificate
Prerequisites: Registration as a nurse in the province of Ontario; one year's nursing practice within the past 3 years.

This program is designed to prepare the registered nurse to be a team leader, or charge nurse, in the operating room theatre. Upon completion of this program, the nurse will also be able to give and supervise care in a recovery room where patients require close monitoring of their vital processes immediately following surgery. Classes are accepted twice annually; in February and in August.

PROGRAM ROUTE: 1

Semester 1 — 19 weeks

Course		Course Title	Total Hours
HBE	400	Human Behavior Ethics and Legal Implication	20.0
SOR	401	Safe Practice	40.0
ANT	401	Advanced Nursing Theory	100.0
OM	401	Organization and Management	40.0
PSI	401	Problem Solving	20.0
ACP	401	Advanced Clinical Practice	280.0
			500.0

Registered Nurse — Rehabilitation Nursing GBC code: NU403

Location: Nightingale
Length: 7 Weeks

Certification: Certificate
Prerequisites: Applicants must hold valid registration as a nurse in a province or territory of Canada and have at least one year's nursing experience. Applicants for Part II of the program, must have successfully completed Part I or an acceptable equivalent.

The Nursing division offers a two-part program in rehabilitation nursing for registered nurses, who wish to develop their understanding and skills in this aspect of nursing.

The program will be of interest to registered nurses currently working in, or planning to work in nursing homes, chronic care facilities, community nursing, rehabilitation hospitals or the rehabilitation units of general hospitals.

Options: Basic Rehabilitation Nursing
Advanced Rehabilitation Nursing

PROGRAM ROUTE: 1
Option: 1 Basic Rehabilitation Nursing
Semester 1 — 8 weeks

Course		Course Title	Total Hours
REHN	400	Rehabilitation Nursing	60.0
REHN	401	Rehabilitation Nursing — Theory	60.0

Course		Course Title	Total Hours
REHN	403	Rehabilitation Nursing — Advanced	60.0
REHN	404	Rehabilitation Nursing — Theory Advanced	60.0
			240.0

Teachers of Nursing — Long Term Care GBC code: NU404

Location: Nightingale
Length: 4 Weeks
Certification: Certificate
Prerequisites: 1) Registered nurses who have related consultant and management responsibility.
2) Registered nurses who are teaching nursing after university preparation and two years' teaching experience.

The program prepares teachers of nursing in the concepts and skills of long term care with emphasis on the elderly. These teachers would then be prepared to work from a basic model to implement programs for registered nurses in community colleges.

PROGRAM ROUTE: 1
Semester 1 — 4 weeks

Course		Course Title	Total Hours
NURS	400	Long Term Care of the Elderly (Practice)	80.0
NURS	401	Long Term Care for the Elderly — Theory	40.0
			120.0

Registered Nurse — Neonatal Intensive Care GBC code: NU405

Location: Toronto General Hospital
Length: 15 Weeks
Certification: Certificate
Prerequisites: Ontario Registered Nurse.

On completion of the program, the nurse will be expected to give high quality nursing care to the critically ill newborn, provide emotional support and teaching for the family of the high risk infant and direct and assist members of staff in the care of the sick newborn.

PROGRAM ROUTE: 1
Semester 1 — 15 weeks

Course		Course Title	Total Hours
NEO	400	Neonatal Intensive Care — Practice	175.0
NEO	401	Neonatal Intensive Care — Theory	280.0
			455.0

Upgrading Program for Graduate Nurses GBC code: NU402

Location: Nightingale
Length: 36 Weeks
Certification: Certificate
Prerequisites: Graduation from a two year nursing program in the province of Ontario. Graduates from outside Ontario must receive a ruling from the College of Nurses of Ontario before making application.

This program is designed to assist A) Graduate nurses who require review in one or more areas before re-writing the College of Nurses of Ontario examinations; B) Graduates who have failed the nursing registration examinations for Ontario; C) Graduates from outside Ontario who require additional courses to satisfy Ontario registration requirements; D) Graduate nurses registered in Ontario who have not practised for a significant period of time. All students must complete a five week module reviewing the basics of nursing theory. Individual needs will determine the selection of one or more 8 week modules that combine theory and practice.

Options: Medical Surgical
Pediatric Nursing
Maternity Nursing
Psychiatric Nursing

PROGRAM ROUTE: 1
Semester 1 — 5 weeks

Course		Course Title	Total Hours
RBN	400	Review of Basics to Nursing	72.0
			72.0

Option: 1 Medical Surgical
Semester 2 — 8 weeks

Course		Course Title	Total Hours
MSN	401	Medical Surgical Nursing — Practical	83.0
MSN	402	Medical Surgical Nursing — Theory	50.0
			133.0

Option: 2 Pediatric Nursing
Semester 2 — 8 weeks

Course		Course Title	Total Hours
PEDN	401	Pediatric Nursing — Practical	140.0
PEDN	402	Pediatric Nursing — Theory	80.0
			220.0

Option: 3 Maternity Nursing
Semester 2 — 8 weeks

Course		Course Title	Total Hours
MATN	401	Maternity Nursing — Practical	90.0
MATN	402	Maternity Nursing — Theory	61.0
			151.0

Option: 4 Psychiatric Nursing
Semester 2 — 8 weeks

Course		Course Title	Total Hours
PSYN	401	Psychiatric Nursing — Practical	140.0
PSYN	402	Psychiatric Nursing — Theory	44.0
			184.0

ACC100 Introduction to Accounting I

Accounting cycle including columnar journals, subsidiary ledgers, work sheet, adjusting and closing entries, financial statements, accounting systems and internal control, the voucher system, cash and accounts receivable, notes and interest, payroll accounting.

ACC101 Introduction to Accounting II

Inventories and cost of goods sold. Plant and equipment. Intangible assets. Accounting principles. Partnership accounting. Corporations: Organization and operation; stock transactions; retained earnings and consolidations. Long-term liabilities. Accounting for investments. Departmentalization and control. Manufacturing accounting.

ACC102 Principles of Accounting

Topics include partnerships and corporations, long-term liabilities, departmental and manufacturing accounting, budgeting, cost accounting, interpretation of financial statements, managerial decisions, flow of funds, flow of cash. Emphasis will be on accounting from the point of view of management analysis and control.

ACC103 Food Cost Control

Attention is given to the use of financial data by management in decision making. Additional topics include (a) Data preparation requirements for input to an electronic system, (b) Reports and other output from the system, (c) Control problems arising from automation and procedures designed to minimize these problems, (d) Techniques for auditing electronic systems.

ACC104 Hospitality Accounting Procedures

To further develop knowledge of accounting procedures for the hospitality industry. Identify the use and necessity of uniform system of accounts. Prepare daily reports, sales data, payrolls, and cash flow statements. Techniques to control floats, take inventory, control cash and cheques, procedures for overages and shortages, internal audit, establish credit policies, credit limits and collection procedures.

ACC105 Accounting I

An introductory course designed to familiarize the student with the basic fundamentals of double-entry bookkeeping up to the preparation of a trial balance.

ACC106 Accounting II

This course covers the basic fundamentals of double-entry bookkeeping up to and including the preparation of a trial balance, and applies these principles to the bookkeeping needs of a legal form.

ACC107 Fundamentals of Hospitality Accounting

To provide the non-accounting student with a basic knowledge of accounting so that he will have the skills required to understand the results of business operations. Identify: Debits and credits, assets and liabilities, post to journals and ledgers. Close ledgers and prepare profit and loss statements and balance sheets. Carry out banking procedures.

ACC108 Purchasing for Hospitality

The development of basic inventory control, purchasing and receiving procedures; selection of supplies, anticipation of market changes, contract purchases ordering and delivery schedules; forecasting requirements, purchase specifications, control and rotation of stock.

ACC109 Accounting

Accounting cycle including columnar journals, subsidiary ledgers, work sheet, adjusting and closing entries. Financial statements. The voucher system and internal control. Cash and accounts receivable. Notes and interest. Valuation of inventories. Depreciation and depletion. Payroll accounting.

ACC110 Purchasing for Hospitality

The development of basic inventory control, purchasing and receiving procedures; selection of supplies, anticipation of market changes, contract purchases ordering and delivery schedules; forecasting requirements, purchase specifications, control and rotation of stock.

ACC111 Accounting

Maintain petty cash. Compare actual costs versus budget. Control cash receipts. Prepare deposit slips. Collect accounts receivable. Report income and expenses. Record income and expenses. Prepare records of income and expenses. Interpret profit and loss statement. Compare actual costs and revenue with budget and industry standards. Allocate costs due to resident abuse. Arrange remittance due to resident (interest of deposit) control cash flow. Interpret property assessment and taxes. Forecast rental and sundry income. Forecast operational expenses. Forecast capital expenditures. Prepare budgets.

ACC112 Food Cost Control

To provide the student with a basic understanding of techniques for the control of food cost through operating activities; food purchasing, receiving of supplies, storing and issuing. Calculation of actual food cost.

ACC200 Financial Accounting I

The emphasis is on accounting from the point of view of management analysis and control. Topics include capital and debt structure of a limited company, analysis of financial statements and statements of sources and applications of funds, taxes and their influence on business decisions, budgeting and its use by management for planning and control.

ACC201 Management Information Systems

This course is designed to familiarize the student with (a) the information needs of management, (b) reports issued to management for decision making, (c) information systems for collection of data, and (d) the principles and philosophies involved in systems design and installation.

ACC202 Cost Accounting I

The aims of this course are (a) to teach the basic concepts and principles of cost accounting, (b) to teach the concepts of materials, labour and overhead as applied to cost accounting, (c) to develop cost accounting techniques to be applied to the solution of problems and case studies.

ACC203 Financial Accounting II

The aim of the course is to familiarize students with management accounting through the application of financial accounting. Topics include changes in working capital, statements of cash flows, break-evens, variables, analysis, measurements, ratios, short and long-term budgets, present value of cash flows and comparison of long range alternate plans, return on capital.

ACC204 Cost Accounting II

The aims of the course are (a) to develop and expand on the cost accounting principles introduced in ACC202, (b) to develop costing techniques for budgeting control of materials, labour and overhead, (c) to teach the principles of process cost accounting and cost of production reports, (d) to instruct on the preparation of budgets; also cash flows, commercial expenses and forecast statements.

ACC205 Auditing

Principles and practices of auditing, with particular emphasis on the understanding of a good system's design and the evaluation of internal control. Year-end verifications of assets and liabilities.

ACC206 Taxation

Income Tax Act and its regulations. Preparation of individual and corporate tax returns. Taxation theory.

ACC208 Food Cost Control

Further control through establishment of production standards; yield tests, production forecasting and planning. Techniques to minimize waste through effective use of overproduction. Calculation and establishment of standard or potential food cost. Report and maintain daily records of food sales and cost. A series of food control systems and their suitability to variable sizes of food operations.

ACC210 Food & Beverage Cost Control

An extensive study of the two aspects of food and beverage cost control; the system records control and the management of employee production. Purchasing, receiving, storage and issuing controls. Further control through portion standardization, forecasting, use of leftovers, standard recipes and production schedules.

ACC211 Payroll Analysis and Control

Maintain petty cash. Compare actual costs versus budget. Control cash receipts. Prepare deposit slips. Collect accounts receivable. Report income and expenses. Record income and expenses. Prepare records of income and expenses. Interpret profit and loss statement. Compare actual costs and revenue with budget and industry standards. Allocate costs due to resident abuse. Arrange remittance due to resident (interest on deposit) control cash flow. Interpret property assessment and taxes. Forecast rental and sundry income. Forecast operational expenses. Forecast capital expenditures. Prepare budgets.

ACC212 Secretarial Accounting (Introductory)

Maintain petty cash. Compare actual costs versus budget. Control cash receipts. Prepare deposit slips. Collect accounts receivable. Report income and expenses. Record income and expenses. Prepare records of income and expenses. Interpret profit and loss statement. Compare actual costs and revenue with budget and industry standards. Allocate costs due to resident abuse. Arrange remittance due to resident (interest on deposit) control cash flow. Interpret property assessment and taxes. Forecast rental and sundry income. Forecast operational expenses. Forecast capital expenditures. Prepare budgets.

ACC213 Accounting

ACC214 Medical Accounting (Introductory)

This course covers the fundamentals of double-entry book-keeping up to and including the preparation of a trial balance and applies these principles to the book-keeping needs of the medical profession.

ACC215 Legal Accounting (Introductory)

This course covers the fundamentals of double-entry book-keeping up to and including the preparation of a trial balance and applies these principles to the book-keeping needs of the legal profession.

ACC216 Managerial Accounting III

How a corporation is financed to do business - bank loans, Sec. 88 etc. (48 hours)

ACC217 Labour Cost Control

Controlling labour costs by a system of forms and procedures, job analysis, work and time schedules, work performance ratios, schedules and sales charts, payroll authorization form.

ACC218 Financial Management for Hospitality

Fundamental accounting and organzational studies of standardized accounting systems for

the hospitality industry. Evaluation of types of business structures, leasing and purchasing criteria, and the preparation and implementation of budgets and capitalization. Analysis and control of original and final books of entry, return on investment and sources of capital. Refining the language and skills of management information systems.

ACC332 Managerial Accounting IV

Inventory control — costing pricing for apparel plants. (32 hours)

ACOU200 Environmental Acoustics

A basic course in sound science: A review of the physics necessary to provide a background to the physics of sound; physiology of the ear; hearing; psychology of hearing. An introduction to the measurement of sound and noise; hearing protection; audiometry.

An examination of federal, provincial and municipal laws, building codes and noise abatement standards; workmens' compensation laws re — hearing protection, hearing loss and deafness — case studies.

ACOU201A Sound and Vibration Analysis

A detailed study of the construction, use and maintenance of the instruments for the measurement and analysis of sound and noise; the techniques of measurement, analysis and reporting of sound and noise.

ACOU201B Sound and Vibration Analysis

A detailed study of the construction, use and maintenance of the instruments for the measurement and analysis of sound and noise; the techniques of measurement, analysis and reporting of sound and noise.

ACOU211A Noise Control I

The acoustic aspects of architectural design: transmission of sound through walls, floors and ceilings; reflection of sound in rooms, reverberation, absorption, echo and whispers, acoustical control of airborne sounds through room and building design.

An examination of the reflective and absorptive properties of common building materials; architectural and industrial sound and noise control materials; materials and objects used in interior decorating and office landscaping.

ACOU211B Noise Control II

An examination of the mechanical systems in a building; the generation, transmission and control of noise from heating and air-conditioning systems; water and plumbing noises; Rotodynamic noise.

A detailed study of vibration, low frequency noises and noises of short duration - impact noises; the construction, use and maintenance of the instruments for the measurement and analysis of vibration and shock; and examination of the technique of shock and vibration control.

ACOU213A Acoustics Laboratory

A workshop on the measurement, analysis and control of sound, noise and vibration; measurement of ambient noise levels indoors and outdoors; noise zones and surveys; measurement and analysis of vehicular, construction and industrial noise; noise from consumer products control of airborne and transmitted noise in buildings; measurement and control of vibration, impact noise and rotodynamic noise.

ACOU213B Acoustics Laboratory

A workshop on the measurement, analysis and control of sound, noise and vibration; measurement of ambient noise levels indoors and outdoors; noise zones and surveys; measurement and analysis of vehicular, construction and industrial noise; noise from consumer products control of airborne and transmitted noise in buildings; measurement and control of vibration, impact noise and rotodynamic noise.

ACOU214A Acoustic Systems Design

Review of drafting fundamentals. Architectural and structural symbols and conventions. Study of national building codes. Preparation of working drawings as related to acoustics. Materials used in construction.

Mechanical drawing techniques including symbols and conventions for layouts of heating, ventilating, air conditioning, plumbing, piping and electrical systems as used in building construction with special attention to acoustical problems. Materials used in construction.

ACOU214B Acoustic Systems Design

Review of drafting fundamentals. Architectural and structural symbols and conventions. Study of national building codes, preparation of working drawings as related to acoustics. Materials used in construction.

Mechanical drawing techniques including symbols and conventions for layouts of heating, ventilating, air conditioning, plumbing, piping and electrical systems as used in building construction with special attention to acoustical problems. Materials used in construction.

ACP400 Advanced Clinical Practice

Students apply their knowledge and gain skill in caring for patients in the intensive care unit, the coronary care unit, the renal unit, and the neurological unit.

ACP401 Advanced Clinical Practice

During the surgical cycle students apply their knowledge and gain skill in caring for patients in the pre-operative, operative, and post-operative phases.

AD100 Field Practice

Field practice is an integral part of the program in affording students supervised clinical experience in a variety of settings. Field experience is considered an essential concomitant to the behavioural sciences.

AD101 Human Growth and Behaviour

A sequential view of the process of human growth and personality development as a means to develop some understanding of the physical, socio-cultural and emotional aspects of development throughout the life span.

AD102 Group Process

Students meet regularly in a group seminar, thus experiencing the dynamics of group interaction. The group process is used as interpretive behavioural material.

AD103 Social Issues Problems and Services

A study of the development and adaptation of institutions in response to community needs and pressures. Levels of responsibility: federal, provincial, municipal and private. The development of agencies providing education, health, welfare and other forms of service. Philosophies concerning the role of law in controlling alcohol and drug use, and the relevant legislation.

AD104 Pharmacology & Physiology (Half Course)

Pharmacology: The program should provide students with information and experience which will alter their attitudes and values toward the use of drugs in such a way that patients in turn will be influenced to improve their attitudes toward drugs through the natural interchange of thought occurring in treatment sessions. Physiology: Basic concepts of anatomy and physiology; How the body is involved with drugs and how it functions with and without their influence.

AD105 Basic Studies in Addiction

A study of mind altering drugs. Why man uses drugs; religious, medical, enhancing and recreational, study of the chemophilic age.

AD106 Theory Methods and Practice of Therapy

A study of the therapeutic procedures and

treatment philosophies related to personality patterns: Freudian theories of personality development will be used as a base from which to analyse the development of current treatment philosophies including those of Adler, Jung, Erikson, Rogers, individual group and family therapy will be demonstrated.

AD112 Field Work Seminar

This seminar provides an opportunity for students to share learning experiences obtained in various field work settings.

AD200 Field Practice

Continuation of AD100.

AD201 Human Growth and Behaviour

A sequence of AD101. The emphasis here is on abnormal development and dysfunction.

AD202 Group Process

Continuation of AD102.

AD206 Theory Methods and Practice of Therapy

Continuation of AD106.

AD206X Practice & Method Counselling

Case presentations are used to further develop an understanding of the counsellor role and the choice of counselling activities through the beginning, middle and ending phases of treatment. Resistance, plateaus, recontracting, prognosis and evaluation are included.

AD208 Values Ethics and Professionalism

The purpose of this course is to encourage study and examination of the values and value conflicts involved in being a counsellor and how these values relate to professional practice.

AD209 Research and Independent Studies

A study of research models and their applications; critical appraisal of research results. Students will conduct a study in a related area of special interest to them.

AD211 Community Practice

Application of the therapeutic "Growth" Model to community problems and dysfunction.

AD212 Field Work Seminar

The seminar provides for the third year part-time student an opportunity to integrate the academic and the practical through sharing experiences, demonstration of treatment modalities unique to the agency, role playing to break blocks in relationships and other experiential exercises. The opportunity for consolidation of the years is important.

ADM100 Administration

This course is designed to acquaint the dental assistant with the various procedures involved in the organization and efficient management of the dental office. The curriculum includes records and accounting, banking, and insurance claims.

ADM101 Administration Practice in Fitness Education

This course develops the organizational skills involved in the running of a recreational program.

ADM108 Administration

This course is designed to acquaint the dental assistant with the various procedures involved in the organization and efficient management of the dental office. The curriculum includes records and accounting, banking and insurance claims. (30 hrs.)

ADM200 Administration Practice in Fitness Education

This course is designed to enable the students to select one of three areas of his or her interest and in turn apply themselves to the development of this area.

The areas of selection are:
(1) Communication Arts
(2) Research Skills
(3) Recreation Program Development

AIR100 Refrigeration

Effect of heat; expansions of solids, liquids and gases, change of state, latent vs. sensible heat. Heat measurements; basic system components; construction and use of pressure - enthalpy diagram; interelationship of system components using pH diagram. Types of controls; importance of head pressure control; air side and refrigerant side methods, system operating controls; system safety controls.

AIR105 Air Conditioning

Review of basic principles of physics pertaining to air conditioning; air and human comfort, factors affecting comfort of human beings. Use of psychrometic chart. Effects of external and internal shading devices. Basic heating and cooling load calculations by various methods and for various types of structure. Principles of distribution system design for various types of residential application. Introduction to ventilation and use of the equal friction chart.

AIR106 Estimating for Air Conditioning

Take-off mechanical drawings for duct work, piping layouts and machine room layouts. Bill of materials and costing for air conditioning of a commercial building and preparation of a sales proposal.

AIR107 Hydronic Heating

Characteristics of heat, body comfort, and construction materials. Heat loss calculations by I. B. R. "Detailed" and "Modern" methods. Types of hydronic systems and component characteristics. Design of systems.

AIR108 Instrumentation

Use of instruments used in the operation and testing of heating, cooling and air conditioning systems.

AIR109 Electrical Fundamentals

Fundamentals of electricity as applied to heating, cooling and air conditioning systems.

AIR200 Refrigeration

Use of manufacturers data to select cooling towers and related equipment. Study of unitary, commercial industrial equipment, heat pumps. Use of psychrometrics chart in the selection of cooling coils, refrigeration piping practice, sizing of refrigeration piping for allowable pressure drop and oil return to the compressor. Continuation of laboratory work of first year in system construction and analysis, testing, operating reports.

AIR201 Automatic Controls

Electric control circuits: Two wire control circuits, three wire control circuits, floating and proportional control circuits. Electronic control circuits, electronic control units, and pneumatic control units. Commercial control systems: zone control for heating, control of unit heaters and ventilators, control of commercial vented fan heating and cooling systems, control of peripheral air conditioning units.

AIR203 Air Conditioning Systems

Heating and cooling load calculations. Use of psychrometric chart. Air quantities for cooling requirements; effect of storage zoning, and pendulum effect, equipment selection. Central station: chillers, coils, heating and cooling, fans, refrigeration, unitary equipment. Water and air cooled rooftop units. Split systems. High pressure dual duct and induction systems: Noise and vibration control.

AIR205 Estimating

Take-off mechanical working drawings for duct work, piping layouts and machine room layout. Bill of materials and costing for air conditioning of a commercial building and preparation of sales proposal.

ANAT100 Anatomy and Physiology

This is an introductory course in elementary human anatomy and physiology taught with emphasis on the spelling of normal terms and their meaning in context. There is some laboratory work.

ANAT101 Anatomy and Physiology

This is an introductory course in the study of common abnormal conditions taught with emphasis on the spellings of medical terms and their meanings in context. Prerequisite is ANAT100.

ANAT102 Dental Anatomy

A lecture and laboratory course designed to teach the student basic dental terminology, the four major notation systems, the development structure and function of teeth and their supporting tissues, the eruption chronology of both dentitions, the functional relationships of the dental structures, and variations and anomalies of dental anatomy. (30 Hrs.)

ANAT103 Dental Anatomy

A lecture and laboratory course designed to acquaint the student with the detailed structure and function of the oral and dental tissues. The anatomy of the dentition is presented through laboratory exercises. (64 Hrs.)

ANAT104 Gross Anatomy

This series of lectures cover the musculature and skeletal anatomy that is required by the O/P technician. Bony landmarks used in measurement criteria are especially emphasized. Cells, tissue and bone with an overview of major body systems are also covered. (32 Hrs.)

ANAT105 Anatomy

Emphasis is given to a strong basis in the skeletal, articular and muscular systems of the human body. The course provides a bridge between functional anatomy and kinesiology.

ANAT120 Introductory Anatomy and Physiology

ANAT201 Anatomy & Physiology (Medical Terminology-I)

Plant layout including inventory control and shipping room; scheduling shifts, co-ordinating section; transporters, etc.

ANAT203 Anatomy & Physiology (Medical Terminology-II)

ANAT204 Anatomy-Head & Neck

This course concentrates on a comprehensive study of the gross anatomical structures of the head and nect. The skeletal structure musculature, nervous system, lymph and blood supply are detailed with particular emphasis on the dental implications (30 Hrs.) The basic physiology of man and especially the physiology of the oral cavity is presented in conjunction with the anatomy program.

ANAT205 Advanced Dental Anatomy

A continuance of ANAT102, the structure of the dentition is reviewed and the perspective of occlusal harmony is introduced. Students, in laboratory exercises, develop an understanding of the physiological basis of mastication (15 Hrs.)

ANAT300 Anatomy & Physiology

A comprehensive course to give the prospective orthotist prosthetist an in-depth study of the anatomy of the heart, systemic circulation (arteries and veins), and pulmonary, coronary and cerebral circulation. Also lectured is the anatomy of the C.N.S. and with it spinal cord and spinal nerves, and a general basic anatomy of the intestinal tract, liver, gall bladder, pancreas, urinary system and skin.

Physiology of the heart, blood pressure, respiration motor and sensory pathways, autonomic nervous system is covered. Basic physiology of digestion, metabolism, electrolyte and acid base balance and homeostasis concludes the course. (48 Hrs.)

ANT400 Advanced Nursing Theory Critical Conditions

Building on a broadened and deepened understanding of pathophysiology and of therapeutics, students gain knowledge essential for skilled nursing intervention in the care of the critically ill patient.

ANT401 Advanced Nursing Theory

Focuses on the role of the nurse as a support to the patient undergoing surgery, and as a skilled member of the team carrying out the surgery.

AQUA100 Aquatic Skill Development

This course will offer instruction towards the Royal Life Saving Society - bronze medallion - as well as mechanical principles involved in swimming, training techniques and water exercises.

ARCH100 Materials and Methods

The manufacture and use of cement, steel, brick, clay, wood and other building products.

ARCH101 Codes and Regulations

A study of the national and the Ontario building code and municipal by-laws as they apply to residential construction.

ARCH200 Materials and Methods

Advanced methods and applications of building materials and products.

ARDR100 BPR & Elementary Drafting

Introduction to construction through plan interpretation and elementary drafting for light construction.

ARDR101 Architectural Drafting

Drafting exercises in architectural principles and problems leading to an integration with other courses such as building construction, design and planning. Free-hand sketching, perspective.

ARDR102 Architectural Drafting I

Preparation of working drawings of plans, sections, elevations and details of frame and masonry construction; perspective drawings; rendering and model making.

ARDR103 Architectural Rendering and Presentation

Perspective drawing, rendering and model making.

ARDR104 Architectural Design and Planning

Building project-clients, planning of space and circulation. Building codes, types of construction, site planning.

ARDR106 Architectural Drafting I

Introduction to dimensions, symbols and conventions; methods and materials for light construction; study of the national building code, in conjunction with the preparation of working drawings.

ARDR107 Mechanical Installation Drafting I

Mechanical drawing techniques of plumbing, drainage, types of hot water heating, air handling, and water supply.

ARDR108 Structural Drafting I

Structural steel: Design of simple beams, simple connections, detailing practices. Reinforced concrete: framing plans; detailing beams, slabs, walls, bar schedules.

ARDR109 Electrical Installation Drafting I

Studies of residential, commercial and industrial wiring systems in single and three-phase layout.

ARDR111 Mechanical Installations Drafting I

Mechanical drawing techniques of plumbing, drainage, heating, air conditioning and electrical layout pertaining to building construction.

ARDR112 Drafting

Three-view drawing, alphabet of lines, dimensioning, sections, free-hand sketching, isometric drawing. Introduction to architectural drawing, types of construction, materials and structural members.

ARDR115 Structural Drafting

Interpretation and preparation for design drawings of structural steel and reinforced concrete structures.

ARDR120 Descriptive Geometry I

Theory of multiview projection; auxiliary views; points, lines and oblique surfaces in space; true length and true shape considerations; edge views, slopes and angles.

ARDR121 Descriptive Geometry

Orthographic projection, isometric sketching, auxiliary and revolution methods, practical applications.

ARDR124 Drafting

The principles of engineering drawing, geometrical construction, orthographic, axonometrics, and oblique projection, dimensioning, sections and auxiliary views. Reading of architectural plans, introduction to piping and duct layout for ventilation, heating and air conditioning systems. Graphical representation of electrical wiring diagrams.

ARDR154 Art and Presentation

Freehand sketching, pictorial drawing, technical illustrating and model making.

ARDR200 Design & Planning

Short history of architecture, analysis of planning, structure, services, aesthetic quality, landscaping.

ARDR201 Final Design Project

An illustrated individual report based on architectural drafting practices and planning. Must be presented for making as part of second year design course.

ARDR202 Architectural Drafting II

Presentation and working drawings of commercial and institutional buildings, utilizing up-to-date procedures from actual case studies.

ARDR220 Descriptive Geometry II

Plane surfaces, intersections relating to lines, planes and figures, dihedral angles, revolutions, parallel and radial line developments, triangulation and vectors.

ARDR221 Descriptive Geometry

Practical problems and drawing practices involving lines, planes, angles, intersections and curves.

ARDR228 Air Conditioning and Refrigeration

Principles of refrigeration, types of systems, system design, combination systems.

ARDR229 Heating Systems

Principles of operation, types of systems, system design, fuel supply.

ARDR230 Plumbing Systems

Principles of design of various systems, including materials and methods.

ARDR232 Drafting

Systems of piping drawing, including piping symbols with drawing and sketching in multiview, isometric and oblique. Duct layout showing graphical symbols for heating, ventilating, air conditioning, plumbing, piping, valves and fittings. Reading mechanical architectural and structural plans.

AT101 Work Management II

Standard data (sewing machine operators) - work station design and efficiency. (48 hours)

AT131 Computer as a Management Tool

Understanding of how computer is used as a tool to assist records and planning in apparel operations. (32 hours)

AT141 Personnel & Industrial Relations

Effective supervision, communications, personnel structure and reporting job specifications. (64 hours)

AT151 Needle Trade Technology III

Seaming and the machines — construction of various seams — tensions — threads — needles, etc. (48 hours)

AT152 Needle Trade Technology II

Some mechanics of sewing machines; history; justifying purchase, variations, efficient uses and common repairs. (32 hours)

AT153 Needle Trade Technology

Advanced systems of work measurement, including time study, standard data and a variety of incentive systems.

AT161 Operator Training I

Includes SEW 141, plus techniques for training production employees, single-needle sewing machine; selection, orientation, evaluation of operators and cutters (performance objectives). (64 hours)

AT163 Personnel & Industrial Relations IA (Train)

Methods of training sewing machine operators.

AT171 Personnel & Industrial Relations III

Human relations as practiced in the efficient apparel plant and workroom; division of work and work loads; scheduling, etc. (48 hours)

AT172 Managerial Organization III

Labor management and relations; unions, Provincial Industrial Standards Act. Minimum wages, rating employees, etc. (48 hours)

AT173 Personnel and Industrial Relations

Labour - management negotiations - agreements, industrial action. (48 hours)

AT174 Managerial Organization

Theories of behavioural psychology and applications at supervisory level.

AT175 Personnel & Industrial Relations

Labour laws of Canada

AT192 Managerial Organization

Plant structure, lines of responsibility. (32 hours)

AT200 Garment Analysis IV

Job sequence, cost and materials management. (32 hours) In cutting room, sewing room, etc. Materials management. (32 hours)

AT201 Needle Trade Technology VI

Fundamentals of apparel plant layout and design, work flow, etc. (32 hours)

AT211 Apparel Merchandising III

Merchandising apparel at retail.

AT211A Apparel Merchandising

AT211B Apparel Merchandising

AT221 Apparel Merchandising III

Major principles in designing, merchandising, and selling a line in men's and ladies' wear.

AT222 Apparel Merchandising

Apparel seasons, cycles, planning a line, etc. (48 hours)

AT230 Personnel & Industrial Relations

Managing staff, motivation, supervision of employees.

AT232 Apparel Merchandising

Continuation of AT222 for succeeding semester - merchandising a line.

AT241 Managerial Economics III

Analysis of import problem facing the Canadian apparel industry, export opportunities, trade theories and procedures.

AT251 Marking & Cutting

Marking and cutting procedures; spreading machines; techniques of laying out fabric, marker-making (mechanical and electronic) (48 hours)

AT252 Garment Analysis III

Apparel construction sequences (men's, women's, children's wear); quality control; introduction to sophisticated machinery (numerical control, computer assisted, etc.). (32 hours)

AT262 Needle Trade Technology 111

Prerequisite: AT151 or industrial experience

Continuation of AT152 leading to more difficult problems of sewing machine repair by stitch types.

AT261 Apparel Merchandising IV

Case studies of various successful apparel merchandising strategies — guest lecturers.

AT271 Managerial Organization IV

Manufacturing costing, estimating, forecasting, principles of budgeting, inventory control.

AT272 Personnel and Industrial Relations III

Techniques of management including "Management by Objectives" (MBO). (32 hours)

AT273 Delivery Schedules

Loading and balancing factory production to maximize shipability of production in the face of production requirements, fabric restraints and customer deadlines.

AT320 Large Plant Problems

Problem solving specifically related to plants with over 100 operators; case histories, role-playing. (64 hours)

AT350 Automated Machinery

Numerical controlled (N/C) sewing machines; special machines; pneumatic aids; computer aids in sewing, pattern-marker and grading, practice). (64 hours)

AT370 Multi-plant Problems

Problem solving specifically related to companies with more than one plant; feeder plants; vertical and horizontal structure; international operations and their problems; case studies. (64 hours)

AT373 Delivery Schedules

International shipping - warehousing. (64 hours)

AUD300 Audit Relevant Courses-Course Projects

Select with advisor's consent. (48 hours)

AUD350 Audit Relevant Courses

For Watchmakers select with advisor's consent. (48 hours)

AUD351 Audit Relevant Courses-Course Projects

Select with Advisor's Consent. (48 hours)

BESC100 Behavioural Science

A course which is designed to apply previously learned concepts in social psychology to the field of dentistry. Topics of discussion will include the social and psychological significance of the mouth and face and fixed and removable prostodontics, public attitudes towards dental health. Dentists and Dental Auxiliaries, the Fluoridation Issue, Management of Fear in the Dental Environment, Types of Patients, Understanding Human Behaviour and Developing Effective Communication Skills. (30 hours)

BESC101 Behavioral Science

Basic behavioral science concepts and principles are applied to the field of dentistry. Psychological aspects of dental disease, the preliminary examination, periodontics, orthodontics, fixed and removable prosthodontics and temporomandibular joint and neuromuscular dysfunction will be discussed. During the course emphasis will be on developing communication and behaviour management skills to enable the students to effectively carry out their responsibilities in the work force. (51 hours)

BIO101 Biological Sciences "A"

This course is the study of Anatomy, Physiology and Microbiology, to provide the student with knowledge of structure, processes, activities and phenomena of the human body as well as characteristics and organization of micro-organisms, and their relationship to man. (135 hours)

BIO102 Human Biology

This course, lectured in the first year, consists of a series of lecture-demonstrations on the

major systems of the human body. The bone structure, musculature, blood supply, lymphatics and innervation systems are considered in detail. The basic physiology of man is presented in conjunction with the anatomy program. (64 hours)

BIO104 Microbiology

This course consists of the study of microorganisms, the process of infection control and sterilization procedures, and the relationship of oral micro-biology to Dental Health. (17 hours)

BIO106 Biology

The components of the circulatory, respiratory and muscular systems will be covered.

BIO107 Biology

This course is lectured in the first year of the Dental Technology Program and is intended to provide the student with a comprehensive insight into the animal kingdom and the position of man within that kingdom. Invertebrate and vertebrate zoology, a discussion to the major systems of man, cell, and tissue biology and principles of biochemistry are the major areas for discussion. (64 hours)

BIO200 Food Microbiology

An introductory course in Food Microbiology with emphasis on Bacteriological Techniques.

BIO201 Biological Sciences "B"

The physiological and psychological processes occurring during the maternity cycle are the focus of this course, along with the physiological changes occurring in the neonatal period. Also included is assessment and medical management utilized in the maternity cycle and neonatal period. (25 hours)

BIO302 Biomechanics

This course lectured in the optional third year is insight into human locomotion specifically related to musculature and the skeletal system. Its contents are a revision of mechanics with specific application to the human system, study of statics and dynamics of body motion particular to gait. Consideration of statics and dynamics in Prosthetics especially alignment criteria. Interface parameters between body tissue and O/P devices, physiological effects of tissue loading, and the application of Kinesiology in Orthotics and Prosthetics. The student will also be encouraged to critically evaluate selected scientific literature. 132 hours)

BUS100 Business Organization

This subject covers primarily areas of business not otherwise covered in the Business Administration Program. Contemporary business issues are analyzed to indicate the relevance of theories and to prepare the student for the business world. The Canadian Business scene is highlighted in terms of content, personalities, corporations and institutions. Students learn the generalists' multidisciplinary approach.

BUS101 Human Relations

An introduction to the fundamental principles of Human Relations; an analysis the the general nature of man as viewed from various thinkers, sciences and disciplines such as philosophy, psychology, economics, political science, theology, sociology, music, poetry, art modern business management theories, etc. an elementary examination of such topics as: Who am I (Self-Awareness); effective communications; effective listening. Students are encouraged to read, research books, periodicals, and to develop a deeper appreciation that all knowledge is potentially valuable as an insight into Human Relations and Human Behaviour.

BUS102 Advertising

BUS103 Finance

BUS104 Government Administration

An introduction to the organization and functions of Municipal Government in Ontario, with

special emphasis on the City of Toronto and the Metropolitan TOronto Corporation. The course will analyze both the political and bureaucratic structures of Civic Government, with some reference to changing urban politics and their ongoing effect on municipal policy and administration.

BUS107 Small Business Management

Fundamental Business Management involves planning of the budget, having a reliable banking relationship, setting up of accounts and proper business communications. In order to operate for profit, it is necessary to control the business according to plans, to advertise and promote sales, to understand competition, mark-up and pricing for sales profits.

BUS108 The Psychology of Buyer Acceptance

BUS109 Job Site Management I

Management, coordination supervision and control of various job site activities as per Dacum pg. 48.

BUS110 Legal, Medical & General Terminology

BUS111 Court Procedures

BUS112 Current Events

BUS113 Legal, Medical & General Terminology

BUS114 Fieldwork in the Courts

BUS115 Current Events

BUS130 Financial Markets

BUS131 Retail Merchandising

The key to successful retailing is offering the right products at the right price. Following a review of market segmentation to identify the wants of prospective customers, the course concentrates on buying methods and organization; pricing, including workup, stockturn and budgeting; stock control and retail promotion.

BUS140 Canadian Studies

BUS200 Job Site Management II

Management, coordination, supervision and control of various job site activities as per Dacum pg. 48.

BUS202 Promotional Management I

Market definition; attitudes, opinions and beliefs, product analysis; analysis of communications, media, and sales promotion; strategies and media execution; organization of advertising, principles and techniques of advertising and sales promotion.

BUS203 Promotional Management II

Company image, public relations objectives, strategy, media and community relations, planning and supervising public relations programs. Techniques of publicity.

BUS204 Urban Development Policy Strategy

Overall company policy, objectives and strategy resource allocation and budgeting, development and interrelationships, decision-making simulation.

BUS211 Human Resources Development

Prerequisite: Human Relations (BUS101)

An examination of human relations and organizational behaviour with special emphasis in developing a student's personal ability in effective leadership and supervision.

The essential theme of this course is that we must first learn to manage ourselves (self-knowledge) before we can supervise, direct, manage or motivate other human beings.

BUS212 Human Resources Management

Principles of Human Resource Management, acquisition, selection, training, motivation of personnel, individual and group behaviour, leadership styles, organizational structures.

BUS215 Media Applications

Students will learn how to use oral and written media in obtaining employment. Students will learn principles and techniques which can be used in on-the-job professional development. Emphasis will be on individual assignments and group activities, the course leader provides personal counselling and coaching.

BUS216 Business-Government Relations

Students will learn about the total environment in which a firm must operate. They will be made aware of the government agencies through which they must work, and will develop a working knowledge of documentation and procedures necessary to work effectively with government.

BUS217 Purchasing & Inventory Control

This course will acquaint the student with the principles of purchasing, arranging contracts (negotiations) and effective control of the flow, volume and disposition of inventory.

BUS218 Financial Management Planning & Control

This course will acquaint the student with the proper procedures for financial accounting, financial statement analysis and control.

BUS219 Law III, Real Estate & Development

This course introduces the student to significant legislation affecting residential housing and an understanding of the legal procedure involved in a development project.

BUS221 Financial Management

BUS233 Word Processing and Dicta

BUS234 Word Processing and Dicta

BUS300 Business Organization

BUS320 Organizational Behaviour

Students will learn the theories and practice of formal and informal networks of communications, individual and group dynamics, authority and power structures, problem solving, decision making, motivation and leadership, the organizational structure and its internal and external environments.

BUS321 Financial Management

The full range of financial decisions which must be taken in modern business is examined. Emphasis is on Candian Business Finance Practice in the areas of raising funds for short, medium and long term need and the efficient management of such funds. The major topic areas include investment decision making,

...ge medium and short term sources of funds; ...e Canadian Monetary System; financial ...alysis and control; working capital management and expansion.

BUS322 International Business

...tudents examine international trade, Euro ...llar and Euro currency markets, foreign ...change markets, multi-national and inter...national companies, the world bank and international balance of payments, contemporary ...anadian oriented examples are utilized.

...tudent research projects examine international business roles of federal and provincial ...overnment agencies and Canadian multi...national companies.

BUS324 Canadian Business Policy & Strategy

...his course deals with the process of policy ...rmation and strategic planning and its relationship to the total business organization. The ...ture of the Canadian Business environment ...ll be analyzed with respect to the legal, politi...al, economic and social constraints acting on ...he firm. A detailed discussion of the social ...esponsibility and ethics of business will also ...e included. Substantial use will be made of ...omputer simulations and case studies.

BUS325 Faculty Directed Research

...he primary purposes of this course are to en...ure that the student maintains or enlarges his ...owledge in the area of major study (option) ...aken in previous semesters, and to develop ...he self-discipline required to work without ...lose supervision.

...he student works with a member of the faculty ...o decide upon a major project in the student's ...rea of expertise, which the student carries out ...s an out-of-class assignment, using the ...aculty member as a guide and resource per...on.

BUS332 Managerial Accounting

...pplication in Apparel Industry I and II. (64 ...ours)

BUS407 Legal, Medical and General Terminology

This course is designed to familiarize the student with the terminology likely to be encountered in courts of law.

BUS408 Court Procedures

The purpose of this course is to familiarize the student with the duties performed by a court reporter and the manner in which a court functions.

BUS409 Current Events

A good reporter is well-read and well-informed. This course is designed to keep the student abreast of the latest developments in politics, science, and the business and medical worlds.

BUS410 Current Events

See Course Description for BUS409.

BUS411 Field Work in the Courts

During the semester the student will work with a reporter in the courts. The court reporter will evaluate the student's work.

BUS412 Legal, Medical and General Terminology

An advanced version of BUS407.

CCCN400 Current Concepts

Focuses on the holistic approach which emphasizes that interventions in one system produce effects in related systems.

CER101A **Ceramics for Furniture Students**

Making tiles and accessories for furniture.

CER151A **Ceramics for Furniture Students**

Accessories for furniture, glazes, etc.

CER201A **Ceramics for Furniture Students**

Advanced ceramics for use with furniture.

CER251 **Ceramics**

Continuation of advanced ceramics for studio work — decorations. Projects include ovenware, large pot forms and sculptured work.

Advanced classes for CER201. (60 hours)

CHEM100 **Applied Chemistry**

Physical and Chemical changes: kinetic and atomic theory; chemical bonding; reactions; equations; periodic table; solids, liquids and solutions, reaction rates; chemical equilibrium; solubility, acids and bases; pH problems, electrochemical and nuclear chemistry; organic chemistry; experiments.

CHEM102 **Biochemistry of Exercise**

The students will investigate the chemical nomenclature and properties of carbohydrates, fats and proteins. Emphasis will be placed on the contribution of carbohydrates, fats and proteins to anaerobic and aerobic system endeavours during exercise.

CHEM105 **Chemistry**

Fundamentals of Chemistry; mixtures and substance, acids, bases; neutralization and pH measurements; chemistry of photography and papermaking; inks and pigments; driers and additives; formation and structure of ink films; solvents and binders; plastic materials and processes; colour and colour matching.

CHEM107 **Chemistry and Science of Dental Material**

This course provides the student with an intense study of the chemistry of the materials utilized in the dental laboratory. Subjects covered in the course work include the fundamental particles of matter, physical; and mechanical properties of dental materials and impression materials. (64 hours)

CHEM168 **Chemistry I**

Atomic theory; symbols; formulae; bonding molecules and ions; acids and bases; corrosion; electroplating; precious metals, inorganic solvents; organic chemistry; structural formulae; applications of organic chemistry in fields of plastics and organic solvents.

CHEM168A **Chemistry II**

CHEM168B **Chemistry II**

CHEM200 **Industrial Chemistry & Equipment**

Unit operations: distillations, evaporation, solvent extraction, filtration, gas absorbtion, electrolytic separations and electorpolating, chemical equipment involved in each operation. Specific industries: oil paints, soaps and detergents, pulp and paper, textiles, steel, plastics. This course provides the student with an intense study of the chemistry of the materials utilized in operative dentistry. Subjects covered in the course include the physical and mechanical properties of restorative and impression materials. (32 hours)

CHEM208 **Chemistry of Dental Materials**

This course is concerned with organic chemistry. Areas of concentration include the hydrocarbons and other organic compounds, polymerization and the role of polymers in Dentistry. (64 hours)

CHEM210 **Polymer Chemistry**

Basic concepts of polymer science. Molecular forces and chemical bonding, functionality, molecular weight and its distribution, configurations and conformations, morphology, addition and condensation, polymerization, copolymerization. Methods for determining molecular weights of polymers. Polymerization techniques.

Natural organic and inorganic polymers. Degradation of polymers. Properties of polymers. Rheological properties and processing of polymers. Instruments for measuring rheological properties. Newtonian and non-Newtonian fluids. Types of flow. Polymer solutions and dispersions. Solid and molten polymers. Application of polymers. Associated laboratory experiments.

CHEM215 **Chemistry**

Introduction to the principles of chemistry including discussions of atoms, molecules, ions, atomic and molecular weight. Chemical changes, acids and bases and chemical equilibrium. A study of the chemical composition of cements and concrete.

CHEM300 **Industrial Chemistry**

This course will cover the basic composition, structure and properties of foods, as well as the chemistry of changes occurring during processing and storage.

CHI160 **Field Practice**

Field Practice is an integral part of the program in affording students supervised clinical experience in a variety of settings. Field experience is considered an essential concomitant to the behavioural sciences.

CHI161 **Human Growth and Development**

The normal growth of the child is followed from birth to adolescence including physical, emotional and intellectual development. The emphasis is on the first six years of the child's life and his emotional growth during this time.

CHI162 **Health First Aid**

A lecture-demonstration course focussed on enabling the beginning student to identify and meet the basic physical and safety needs of the children and youth in their care. A standard first aid course is included as well as simple home nursing procedures.

CHI164 **Caring for the Disturbed Child**

The purpose of this course is to arrive at a treatment philosophy. Class discussions are based on students' observations from field placement. Emphasis is placed on areas of basic care and understanding of behaviour of children and staff.

CHI165 **Activities with Children**

This course will explore a variety of media through play and investigate broad areas of activities that require specific skills of the child. It is the essence of play that the experience is more important than the result. It is through the "doing" that structure actually emerges; the form of any thing is latent in the process.

CHI166 Social Services

Legislation and institutions are studied and related to the child care field. This course includes field trips, guest speakers and class discussions.

CHI167 Student Group Seminar

Each week staff advisors meet with their students to discuss common concerns and explore issues raised by either faculty or students.

CHI172 Group Process

Purpose of the course: To introduce students to the processes of social interaction and methods of observation through research and laboratory experiments and to encourage a more appreciative awareness of individual styles and strengths in group participation.

CHI174 Empathy Training

The course will enhance the student's understanding of self, develop the ability to enter into another person's feelings and to feedback verbally the message that the listener is fully attentive. Students will also develop their potential for communicating messages that are congruent with their feelings.

CHI260 Field Practice

A continuation of CHI160.

CHI261 Psychopathology of Childhood

Discussions include comparison of normal and abnormal development according to the personality theories of Freud, Erikson, descriptions and functioning of defenses and study of specific categories of disturbance (i.e. Autism, Schizophrenia, etc.)

CHI262 Caring for the Disturbed Child

A continuation of Caring I, emphasizing the development of treatment plans for disturbed children on an individual basis.

CHI265 Activities with Children (Water Safety)

A combined theory-practice course to ensure safety and some skill in working with children in and around water.

CHI267 Student Group Seminar

A continuation of CHI167.

CHI268 Treatment Philosophies

An introduction to therapeutic approaches extant in child psychiatry and the mental health field today. Major theories underlying the chosen methods of treatment area discussed.

CHI270 Group Process II

A focused study of the processes, dynamics, structures and politics most relevant to the child care treatment centre in its community and professional setting. To include topics of supervision, internal structures, relation to community, lines of responsibility, etc.

CHI271 Therapeutic Programming

Discussion of the meaning and purpose of play and fantasy and the use of such understanding for more effective communication with children.

CHI272 Working with Families

This course will explore the particular concerns and problems which arise in working with parents and families. Consideration is also given to teacher-child-child-care worker relationship.

CHI275 Adolescence

This course has been designed in response to the increasing number of adolescents receiving mental health services. The focus is on the physiological, psychological and sociological aspects in the stages of growth from puberty to adulthood.

CHI276 Adolescent Role & Identity

CIV101 Engineering Drawing and Design

Fundamentals of structural engineering drawing, according to accepted standards and specifications.

CIV103 Construction Materials

Engineering testing and investigation of soils; the manufacture and use of cement and asphalt; the design and control of concrete mix; the design of asphalt mix as applied to highway construction.

CIV104 Specification and Estimating

Method of Measurement and take off for estimates for building and civil works of a relatively simple nature.

CIV106 Land Division

A study of planning legislation in Ontario including official plans, use and zoning, the planning act, and subdivision design.

CIV200 Structural Drawing and Design

Practical introduction to basic design and drawing, as applied to modern structures in reinforced concrete and structural steel.

CIV202 Municipal Services

Collection and distribution of community water supply, factors and manipulations influencing run-off and disposal, pipe sizes, gradients and location of sewer types.

CIV203 Highway Technology

Population and traffic analysis; location, design and construction of roads; legal and engineering requirements; materials and maintenance.

CIV204 Specifications and Estimating

A continuation of CIV104 but dealing with more complex structures together with specification reading and preparation of tenders and analysis of prices.

CIV302 Municipal Services

Zoning by-laws and regulations, planning boards and committees, studies in planning, preparation of planning reports and plans.

CO100 Building Construction

Site selection and excavation, concrete formwork design, construction equipment, power and hand tools, detailing construction elements, plan interpretation, systems and types of construction, field trips.

CO101 Quantity Surveying I

Method of measurement and preparation of estimates for building works for domestic, small office and industrial buildings.

CO102 Mechanical Installations I

Storm and sanitary drainage, plumbing layout, venting and fire protection.

CO103 Construction Materials

The manufacture and use of cement, steel, brick, clay, wood and other building products; the control and application of quality concrete under laboratory conditions.

CO104 Site Engineering

A basic course in the fundamentals of plane surveying, utilizing the various survey instruments and equipment.

CO105 Principles of Concrete

A detailed study of cement and its properties, concrete mix design, quality control, testing procedures and compilation of results.

CO106 Concrete Construction Methods

An introduction to concrete components used in all construction; the mixing, transporting, placing, finishing and curing of concrete.

CO107 Bluepring Reading & Drafting

Fundamentals of drafting, interpretation of concrete structural drawings.

CO108 Quantity Surveying

CO110 Building Construction

Principles of building construction in terms of the assembly of materials; examination of typical systems of wood and masonry construction. Study of architectural detailing. Design, construction equipment, power and hand tools, site fabrication — pre-fabrication, field trips.

CO111 Materials of Construction

The manufacture and use of cement, steel, brick, wood and other building products used in home construction. The control and application of quality concrete under lab conditions. Theory of selection and location of materials in the building fabric, especially walls, roof, interior finishing, detailing. Testing and investigation of soils.

CO112 Contracts Specifications & Codes

Contracts, contract law, standard forms, study of codes based on national building codes and Ontario building codes and others. Specification of materials and methods of construction. Site selection, excavation, concrete formwork design, construction equipment, power and hand tools. Site fabrication — pre-fabrication, field trips.

CO200 Building Construction

Reinforced concrete, structural steel, laminated timber and masonry construction and equipment; construction organization, architect, engineer and trades. Drawing and interpretation; field trips.

CO201 Quantity Surveying II

Advanced method of measurement and preparation of estimates for building works including preparation of estimate and price build-up

CO202 Mechanical Installations II

A study of those elements of environmental controls, such as heating, air conditioning, electrical and plumbing design and layout within the modern building.

CO203 Contracts & Specifications

Contracts, contract law, standard forms, methods and applications of various scheduling systems.

CO204 Site Engineering

The use and application of survey instruments, setting out buildings, offsets, curves, grading and earthworks.

CO205 Principles of Concrete

Continuation of CO105, further detailed study of cement and its properties.

CO206 Concrete Construction Methods

Regulations and building code, construction and inspection methods, basic study in light-weight concrete, specialized concrete building components.

CO207 Concrete Structural Design

Theory and design of reinforced concrete structures and sturctural elements.

CO208 Mechanical and Electrical Installations

A study of those mechanical and electrical devices and installations affecting the total design of a structure, such as elevators, escalators, conveyors; fire protection, plumbing, heating, air conditioning and electrical layouts.

CO209 Contracts and Specifications

CO210 Contracts and Specifications

Contracts, contract law, standard forms, methods and application of various scheduling systems.

CO211 Construction Project Scheduling

Pre-tender planning, basic network. C.P.M. Pert. Bar Charts, etc.

CO212 Building Construction

Principles of construction as applied to re-concrete. Structural steel, laminated timber and masonry construction and equipment, construction organization, the architect, engineer and other trades field trips.

CO213 Mechanical-Electrical Services-Electrical

CO214 Mechanical-Electrical Services-Plumbing

CO215 Mechanical-Electrical Services-Heating

CO216 Site Engineering

COAT203 Thermoset Resins

Raw materials, manufacturing, chemistry, curing and properties of thermoset polymers and co-polymers used in coatings; polyesters, alkyds, epoxies, phenolics, silicones, amino resins, urethanes, furanes.

COMM101 Communications

The focus is on identification of the elements which are essential for effective communication, techniques of communication, the differentiation between a social and therapeutic relationship, recognition of factors which influence communication, and the utilization of concepts of communication in group interaction. (45 hours)

CUL200 Culinary Management Projects

The practical application of culinary management techniques to real problems through case studies, seminars, workshops, research reports and field assignments.

CW100 Field Work

Field work is the core of the program and will be concurrent and integrated with course work in both years. A catalytic approach is implied enlisting citizen participation and encouraging citizen leadership to mobilize identifiable resources around issues of concern to communities.

CW101 Field Work Seminar

Students will meet in small groups with their staff advisor to share common difficulties arising in field work. The participation of all students involved in field work will be required.

CW102 Community Services and Resources

This course is to acquaint students with systems of existing services and to analyze methods of modification for enabling agencies to become more relevant to community needs.

CW104 Community Practices and Methods

Students will learn a variety of necessary skills to be useful community workers and be more employable, for example: layout, printing, photography, video, films, gestetner, office procedures, writing briefs, action research, letter writing, chairing meeting, parliamentary procedure, etc.

CW105 Group Process I

Group Process I will focus, through participation, on the dynamics of small groups, using the student group itself as a learning laboratory.

CW106 Community Development

Students will focus on examining frameworks for community development (theory and practice) models, strategies, resources, influencing decision making processes, and systems modification. Examples will be studied.

CW107 Human Growth and Development

The critical stages of personal growth will be related to the socio-economic, political and ecological variables which influence the life-long development, potential and actions of the individual within the larger society.

CW200 Field Work

A continuation of CW100.

CW201 Field Work Seminar

A continuation of CW101.

CW202 Business and Administration

This course provides basic techniques for managing and supervising centres or organizations. Elementary bookkeeping, personnel procedures, fund raising, the conduct of business meetings and the organization of staff will provide core subject areas.

CW203 Canadian Society and Social Change

This course will explore changing trends in Canadian Society as shown through historical precedence and socio-economic development. Focus will be on analysis of media, governmental reports, novels, essays etc., that demonstrate influences on Canadian Society, and which are of current interest to students and advocates of community improvement.

CW204 Communications and Understanding Media

This course will focus primarily on a continuing review and analysis of the various media and consideration of how to use the media for community work purposes.

CW205 Group Process II

Group Process II will encompass goal setting and organizational development. The overall concept of this course is to demonstrate group development from an analysis and demonstration of the dynamics and potential of the small group, through an exploration of techniques (role-playing, creative problem-solving) and theories of group, to a study of formalized groups (families, organizations, etc.) and how they set goals and carry out activities.

CW206 Independent Study Seminar

Students will pursue a topic of particular interest or relevance with the assistance of a staff member.

CW207 Political Science

This course is designed to give the student an understanding of municipal, provincial and federal politics and explores their interrelationships. Methods of social action that have an impact on the political process will be studied.

CW208 Analysis of Health Services

Familiarization with and analysis of various current treatment philosophies and methodologies relevant to community work needs and philosophy.

CW209 Basic Support & Intervention Skills

Theory and practice of interviewing and counselling; functions of the interview; fundamentals of successful interviewing; communication facilitating methods and barriers to effective communication; assessment and recording; survey methodology and research technique.

DCW100 Infant and Child Development

A look at development from birth to 2 years from the perspective of (1) Heredity and environment; (2) Growth and maturation; (3) Learning, motivation and emotion; (4) Language, and (5) Intelligence. A discussion of relevant infant care routines and programs and the adult's role in those programs.

DCW101 Health & Well Being

To increase the awareness of healthful concepts specifically for working with infants and children in a daycare centre. A standard first aid course is given by the Canadian Red Cross.

DCW103 Mental Health

A seminar on the infant's personality development and the impact of the infant-adult relationship on the growth and development of the child.

DCW104 Principles of Day Care

Current ideas and existing day care programs are examined and discussed to determine the way they meet the developmental needs of infants and children.

DCW105 Creative Expression in Childhood

This course will explore the creative process: what activates it; how it functions; how its universal aspects have implications in the modes of learning and self-expression of the growing child. Accordingly, the course will investigate play and a variety of media, through seminars and workshops.

DCW107 Community Services

This course introduces students to the range of agencies concerned with the health and welfare of the child and the family.

DCW108 Group Process

A study of group dynamics with opportunities to develop skills in leading groups or affecting group processes.

DCW110 Special Studies-Communication

A reading seminar in English literature supported by background philosophy on man's research for identity in the 20th century.

DCW111 Field Work Seminar

The class is made up of small groups headed by a staff advisor, who is also the co-ordinator between the college and field placement. To discuss the courses in relationship to field placement.

DCW112 Field Practice

Individual student supervision and evaluation is given in selected day care settings to provide

an opportunity for the student to observe and to practice with infants and children in day care as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW113 Field Practice

Individual student supervision and evaluation are given in selected day care settings to provide an opportunity for the student to observe and to practice with infants and children in day care, as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW114

DCW200 Human Growth and Development

A study of the process in which an infant grows and develops into a mature human being — the nature of the relationship between the child and society — the stages of development to maturity from a variety of theoretical and practical viewpoints.

DCW201 Children With Special Needs

An examination of etiology and treatment concepts related to children with special needs: physical, psychological and sociological.

DCW202 Cognitive Development

Aim: to develop a theoretical framework for examining how learning occurs. The student will be required to research and generate a program within an area of individual interest such as science, drama, etc.

DCW203 Planning Management and Legislation

A study of the resources and skills needed in setting up and managing a day care centre, starting with legal requirements, initial stages of planning and developing programs and progressing to final stages of financing, accounting, and managing a day care operation.

DCW204 Varieties of Day Care

A survey of various day care programs reflecting different philosophies in day care accompanied by field trips where possible.

DCW205 Creative Expression in Childhood

A study of the resources and skills needed in setting up and managing a day care centre starting with legal requirements, initial stages of planning and developing programs and progressing to final stages of financing, accounting, and managing a day care operation.

DCW206 Family Dynamics

A study of the various interactions in families and the facts and issues which influence them and a practical application of this knowledge to actual day care family situations.

DCW207 Parent Interviewing and Counselling

A survey of parent education theories with opportunities to practice techniques of interviewing, counselling, group education and community organization.

DCW208 Professional Development

This course will include concepts of professional behavior and responsibilities to children, parents, colleagues and members of allied professions as well as the importance of responsibilities for self growth within the day care field.

DCW210 Field Work Seminar

The class is made up of small groups headed by a staff advisor, who is also the co-ordinator between the college and the field placement, to discuss the courses in relationship to the field placement.

DCW211 Field Placement

Individual student supervision and evaluation are given in selected day care settings to provide an opportunity for the student to observe and to practice with infants and children in day care, as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW212 Field Placement

Individual student supervision and evaluation are given in selected day care settings, to provide an opportunity for the student to observe and to practice with infants and children in day care, as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DCW213 Field Placement

Individual student supervision and evaluation are given in selected day care settings, to provide an opportunity for the student to observe and to practice with infants and children in day care, as well as to provide an opportunity for the student to gain necessary information for different course assignments.

DENT101 Dental (Manipulation) Technology

During this series of laboratory sessions, the student will be given the opportunity to manipulate the various materials used in dentistry. Subjects covered will include gypsum, alloys, porcelain, resins, impression materials, gold and metal alloys, denture base and tray materials, and dental polishes and abrasives. (34 Hrs.)

DENT104 Preventitive Dentistry-A

This course serves as an introduction to the practice of preventive dentistry. Some basic concepts are presented but the emphasis of the program is on the practical approach to the problem. Methodology and patient counselling techniques are emphasized. (15 Hrs.)

DENT106 Dental Materials

A series of lectures and laboratory exercises presented to first year students on the subjects of dental materials. The purpose of the lectures is to introduce the student to a wide variety of materials to which he or she will be exposed, during routine activities in the dental office.

The laboratory exercises provide practical experience in the technical area required of the dental assistant. (79 Hrs.)

DENT109 Radiology

This course consists of a series of lectures on the physics and application of radiography in dentistry. The student will spend a considerable period of time applying these principles, both through seminar-demonstration and clinical experience. (79 Hrs.)

DENT115 Orientation to Dentistry

This short program is undertaken at the beginning of the semester. It is intended to introduce the student to the art and science of dentistry as a body of knowlege, and through this introduction to orientate the student to his or her role on the dental team. This period is also used to familiarize the student to nomenclature, clinical decorum, personal hygiene and routine office maintenance. (30 Hrs.)

DENT116 Oral Examination

In preparation for clinical practice, this course is intended to teach the student to identify normal and abnormal conditions in the oral cavity. A knowledge of treatment patterns and their consequences will form a major component of the program. (32 Hrs.)

DENT204 Preventive Dentistry-B

This course builds on the practical knowledge acquired in the First year. The course consists of laboratory exercises, lectures and demonstrations which elucidate the etiology of caries and periodontal disease, together with the current methods available for the control of these diseases. The concepts of plaque, fluorides, and other anti-carcinogenic agents will be dis-

cussed. Practical experience in preventive counselling techniques enables the student to fulfill his or her role in preventive dentistry. (30 Hrs.)

DENT205 Preventive Dentistry

A comprehensive course covering the important concepts and techniques in the practice of preventive dentistry.

Topics included are dental plaque, dental caries, periodontal disease, fluorides, pit and fissure sealants, preventive home care procedures, patient education and preventive programs in private practice.

DENT206 Dental Health Education

This course will offer students practical approaches to classroom, small group, and individual teaching practices which will enable them to effectively carry out their responsibilities as dental health educators, practical teaching experience is included as part of the curriculum. (45 Hrs.)

DENT209 Advanced Radiography

This short program is devoted to a theoretical study of the principles of the extra oral radiographic techniques used in dentistry. Demonstrations in techniques will be held. (10 Hrs.)

DENT217 Community Dentistry

This program discusses the role of dentistry in the overall health of the community. Topics include the utilization of dental services and auxiliaries in both the public and private sectors, preventive measures and prepayment mechanisms. (15 Hrs.)

DENT316 Community Dentistry, Ethics & Jurisprudence

This program is designed to provide an overview of the various factors which influence the provisions of dental services to the community. Need, demand and supply of services will be analyzed. The role of auxiliaries in effecting change in dental delivery patterns will be stressed.

The lectures in ethics present the meaning of the dental profession, the interrelationships of auxiliary personnel to their peers and the ethical relationship and responsibility of the dental profession to the public.

The course on jurisprudence includes discussion on the source of the law in Ontario, the court system and legal terminology. The Dentistry Act, The Denture Therapists Act, The Health Disciplines Act and other appropriate legislation are explained. (15 Hrs.)

DES169 Design I

Theories of line, layout, design, lettering (styles), transferring designs to metal, etc. (32 Hrs.)

DES169D Jewellery Design (Refresher)

Review of principles of good design, sketching, drawing and further study of features of well-designed jewellery.

DES179 Design for Jewellery Arts

Continuation of DES 169. Sketching, rough ideas, finalizing and shading to achieve depth and realism

DES269 Design

Sketching and rendering fancy shaped stones and modern jewellery.

DES279 Design Simplified

Ring sketching for quick counter demonstration. Promoting special order work.

DES300 Design-A-Line

Refining the pattern drafting and design skills by designing and producing a small line of garments (6-12) as in industry. Evaluation by a committee from industry. (336 Hrs.)

DES351 Design-A-Line

As DES 300 but in styles for a season other than selected for DES 300. (400 Hrs.)

DES369 Jewellery Design

Sketching and layouts rendering of projections in black and white and colour.

DES379 Jewellery Design

Painting and rendering platinum and gold jewellery, analysing a design to ensure practicality.

DES469 Design

Post graduate — redesign old pieces, style. (48 Hrs.)

DES479 Design

Post graduate — sophisticated styling, renovating old jewellery, designs for repairs. (48 Hrs.)

DIC200 Medical Dictaphone

Initially transcription will be from professionally dictated tapes, belts and discs, including material such as operative notes, final summaries, case histories, etc., covering areas such as neurology, internal medicine, orthopedics, etc. In the last semester, emphasis is on intensive production of actual hospital dictation in addition to on-the-job training in a downtown hospital.

DIC201 Medical Typing and Dicta

Initially transcription will be from professionally dictated tapes, belts and discs, including material such as operative notes, final summaries, case histories, etc., covering areas such as neurology, internal medicine, orthopedics, etc. In the last semester, emphasis is on intensive production of actual hospital dictation in addition to on-the-job training in a downtown hospital. The operation of memory typewriters is also covered.

DIC202 Medical Typing Dicta and Word Processing

In this course the student has the opportunity to handle medical terms on the typewriter, as well as using the transcribing equipment. Familiarization with the operation of memory typewriters is also included.

DIC203 Medical Dictaphone and Word Processing

An advanced version of DIC 200.

DIC205 Dictaphone

This is a short course to familiarize the secretarial student with the use of transcribing equipment. The student is exposed to the regular transcribing equipment as well as to the more sophisticated equipment such as continuous loop system, thought tanks, etc.

DRES141 Apparel Construction (Dressmaking) I

Projects: shifts of jumpers, skirts (wool), and/or blouses (cotton). Measurements, relationship of pattern, style and fabric, laying out patterns, sewing techniques (hand and domestic machine). (64 Hrs.)

DRES145 Apparel Construction (Dressmaking) II

Prerequisite: DRES 141 or equivalent.

Continuation of DRES 141 — the proper selection of style and pattern to suit the wearer and material; fashions and their changes; knits and stretch fabrics techniques; intimate wear and lingerie; special finishes. Student to supply materials. (30 Hrs.)

DRES145A Apparel Construction (Dressmaking) Intermediate

DRES146 Tailoring I — Basic

Prerequisite: DRES 141 or sewing skills.

Ladies tailoring, sewing, cutting techniques, finishing coats and suits using commercial techniques, some men's and children's tailoring. Students supply own materials.

DRES151 Dressmaking — Advanced

Construction layout, cutting, finishes, making samples. Projects: detailed dresses, skirts and weskits (lined) and gowns. Emphasis on fitting, hand finishes and detail. Application of trims, bound buttonholes, pockets, zippers, etc. (96 Hrs.)

DRES156 Tailoring — Intermediate

Projects: wool coat or cape; suit jacket and skirt; etc. (30 Hrs.)

DRES221 Couture Construction

Special techniques for hand sewing and finishing garments.

DRES222 Alterations and Fitting

Alterations and fitting garments for custom clients.

DRES241 Couture Construction

Most efficient ways of cutting and seaming garments and assembling parts to form clothing. Efficient use of fabric to minimize waste. (96 Hrs.)

DRES241A Couture Construction

Make dress from stock pattern; make own dress design into garment; samples from factory cotton.

DRES242 Fabrics III

Project: fabric book (samples and examples of best use) — co-ordinate colors and textures knits, trims, braids, etc. (48 Hrs.)

DRES244 Alterations, Fitting — Advanced

Pattern changes before construction to elimi nate fitting problems. (96 Hrs.)

DRES246 Tailoring III — Men's

Special finishes: buttons, belts, etc. Men's apparel. (48 Hrs.)

DRES247 Dressmaking Construction III — Advanced

Sample-making for the professional appare plant. (48 Hrs.)

DRES248 Apparel Plant Supplies

Trims, zippers, supplies, etc., and the optimum methods of efficient purchasing and stocking of them. (64 Hrs.)

DRES249 Store Workroom Problems

Case studies of workroom problems. (64 Hrs.)

DRES251 Couture Construction

Engineering shortcuts to accomplish more work in less time. (96 Hrs.)

DRES252 Fabrics — Knits — Trims — Braids

Selection and buying; analyse ready-made garment; description; labelling laws.

DRES254 Alterations, Fitting (Advanced)

Pattern changes before construction to elimi nate fitting problems. (96 Hrs.)

DRES255 Tailoring

Tailoring men's and ladies' garments — con struction.

DRES256 Tailoring IV

Commercial approach to finishing and substitutes for hand operations. (32 Hrs.)

DRES257 Couture Construction

Hand sewing and finishing techniques for fur design students.

DTC200 Denture Therapy — Clinical

In semesters 3, 4 and 5, the denture therapy student concentrates upon the art and science of providing denture prostheses for the public. Initially, the student will practise on mannequins and will be phased into patient care through the conduct of the course. Clinical decorum and patient-therapist relationships are strongly emphasized. (384 Hrs.)

DTC300 Denture Therapy — Clinical

In semesters 3, 4 and 5, the denture therapy student concentrates upon the art and science of providing denture prostheses for the public. Initially, the student will practise on mannequins and will be phased into patient care through the conduct of the course. Clinical decorum and patient-therapist relationships are strongly emphasized. (240 Hrs.)

DTFW300 Denture Therapy — Field Work

In the fifth semester, denture therapy students will have the opportunity to visit various practitioners and observe the practical aspects of practice. The offices will be carefully selected and the experience will be problem-oriented. (60 Hrs.)

EC100 Economics

This course is concerned with the nature and scope of economics. Private and public ownership is discussed, as well as capitalism, socialism and communism, theory of price, supply and demand, wages, rents, interest and profits, consumer credit and borrowing, personal finances, social services, methods, advertising. (64 Hrs.)

EC101 Economics

This course is concerned with the nature and scope of economics, private and public ownership is discussed, as well as capitalism, socialism and communism, theory of price, supply and demand, wages, rents, interest and profit.

EC104 Economics

EC105 Economics

Understanding of the economic factors that influence the personal and business affairs of Canadians, basic economic structure of our society, supply and demand, business organization, money and banking, international trade, business cycles, public finance and taxation, consumer credit and borrowing, personal finances, social services.

EC111 Economics

This course gives an historical overview of major economic theories and assesses present economic problems in Canada. It also covers some practical aspects of economic life, such as banking, negotiable instruments, mortgages and taxation.

EC175 Managerial Economics I

Finaricial and banking — sec. 88 of The Bank Act — capital, etc.

EC210 Economics I

Basic Economics and industrial organizations: forms of economic organization and business financing.

EC211 Economics II

Supply and demand business cycles and compensatory countercyclical fiscal policy, labour economics, insurance, civics organization of federal, provincial and municipal governments.

EC214 Business Management Labor Relations

A study of selected principles of and problems in industrial relations with emphasis on supervision, the essentials of successful management, organization, inventory control, regulations and other phases of small business operation.

EC231 Managerial Economics

Inventories, control, materials flow, financing.

EC241 Managerial Economics III

Statistics and quality control — apparel.

EC242 Managerial Economics II

Economics of the apparel industry.

ED100 Fundamentals of Supervision

An introduction to the role of the supervisor in industry. Topics include the responsibilities of the supervisor, leadership, effective communications, and employee morale. Using a number of case studies students will be actively involved in applying the concepts discussed to actual work situations.

ED101 Teaching Techniques

The development and application of a variety of effective techniques useful in instructing individuals and groups. Topics include subject analysis, objectives, lesson planning, motivation and audio-visual aids. Each student will be required to present several practice sessions followed by a constructive critique of the lesson.

EDP100 Introduction to Data Processing

This course provides an overview of business data processing which will prepare the participant for further study in the areas of programming and systems analysis. Topics include hardware and software features, programming languages, flowcharts, and programming experience.

EDP101 Cobol I

Language mechanics of cobol are introduced and students gain practical experience by writing programs to solve business type problems. Emphasis is placed on documentation of programs.

EDP102 IBM/370 Assembler I

This course introduces IBM/370 architecture and discusses in detail the components of the IBM/370 series of computers. Topics include hardware and software features while emphasizing programming in assembler language.

EDP103 Programming I

Prerequisite: EDP 100 or equivalent.

The objective of this course is to provide a thorough knowledge of the programming techniques used to solve business applications. Topics include accounting marketing and physical distribution problems and the participant is encouraged to use the computer as a powerful tool for management.

EDP104 Management Information Systems (MIS)

This introductory course in MIS examines the role of the systems analyst within an organization. Case studies and class problems encourage participants to develop skills and to utilize techniques associated with the systems function.

EDP105 Elementary Computer Concepts

The function of the computer, its use and limitations, basic computer systems, tele-processing, hardware, software, time sharing, basic programming, problem solving.

EDP181 Computer as a Management Tool I

Business math-orientation to computers, flowcharts.

EDP182 Computer as a Management Tool II

Elementary programming. (48 Hrs.)

EDP191 Computer as a Management Tool III

Production control with use of EDP equipment in apparel industry.

EDP200 Cobol II

Applications such as accounts receivable and payroll are the subject of programming assignments. Techniques include sorting, summarizing and master file update.

EDP202 Management Information Systems

Prerequisite: EDP 900 or equivalent.

This introductory course in systems analysis is designed to acquaint students with the important role of the computer in business. A number of business computer applications are used to illustrate the effectiveness of the computer as a tool for management. Students gain an insight into the criteria applied by managers in deciding how the computer should be used.

EDP204 Advanced Programming

Prerequisite: approval by the instructor.

Applications requiring several interactive programs and involving the use of direct access storage are designed by the class. Individually, students write the necessary programs to install and maintain the applications. COBOL is the primary language, however, techniques for insertion of segments in other languages are introduced.

EDP206 Systems Analysis and Design

Prerequisite: a "C" standing in Systems Analysis I or equivalent. This advanced course on systems analysis involves active participation in problem investigation and encourages analytical examination of facts prior to the presentation of a proposed solution.

EDP208 Advanced E.D.P. Topics

This advanced course focuses on the current state of EDP technology. Trade periodicals are the primary reference source.

EDP209 Computer Hardware & Systems

This course examines the development of computer hardware systems and explores the trends in the design of future computer systems. Topics include computer organization, data representation, input/output media, data entry, distributed processing, teleprocessing and mini-computers.

EDP210 Systems Analysis & Design

This advanced course involves active participation in problem investigation and encourages analytical examination of facts prior to the presentation of a proposed solution.

EDP211 Computer Software & Systems

This course examines the development of computer software and explores the trends in the design of future computer software. Topics include operating systems, multi-programming, virtual storage, JCL (job control language), and comparative programming languages such as PL/1, BASIC, FORTRAN or APL.

EDP253 Computer as a Management Tool IV

Practical uses of computers in industry — EDP systems design for apparel.

EDP360 Advanced Computer Uses

In the apparel industries on line, etc., simulation, digitizer, operations research. (64 Hrs.)

EL106 Electrical and Electronic Fundamentals

Ohm's Law, D.C. circuits, power dissipation, magnetism and electromagnetism, inductance, capacitance, alternating currents, inductive and capacitive reactance, impedance, A.C. circuits, power dissipation and A.C. circuits.

EL115 Applied Circuit Analysis I

A tutorial in solving simple passive D.C. and A.C. circuits using the slide rule, and using basic algebraic and trignometric manipulations in their solution. An introduction to time constants, and to circuits requiring solutions by quadratic equations.

EL121A Direct Current Machines

See description for EL 121T.

EL121T Direct Current Machines

Construction and operation of separately-excited, shunt, series, and compound generators; armature windings; equalizer winding; commutation; three-wire generators; dynamotors; series boosters; amplidynes; rototrols; regulex generators; Ward-Leonard system; construction and operation of shunt, series, and compound motors; braking; maintenance of D.C. machines.

EL123T Electrical Drafting IIB

Three-phase motor control circuits; induction motor control and schematic, part-winding motor control and schematic; synchronous motor control schematic; reduced voltage starting circuits; forward-reverse control; point-to-point and highway type wiring diagrams; conversion from wiring diagram to schematic diagram; D. C. motor control schematics.

EL125T Electrical Laboratory IIB

Elements of the shunt generator, voltage characteristics of a shunt generator, shunt and separately excited generators, components of a voltage drop in a shunt generator, rotational losses in a D.C. machine, separation of rotational losses (D.C. generator), efficiency and losses of a shunt generator, the compound generator, efficiency and losses of a compound generator, shunt generators in parallel, compound generators in parallel, direct current booster, direct current shunt motor starting rheostat, operation of a direct current shunt motor, static torque of a D.C. motor, efficiency and losses of a shunt motor, the direct current series motor, the compound motor, the Kapp opposition test, motor generator set.

EL126A Control of D.C. Apparatus Laboratory

Relays and contractors, schematic diagrams and circuit layouts, across the line starting, series starting resistance controllers, manual and automatic. Counter E.M.F. starter time limit starter. Volt drop acceleration control, series relay acceleration, time relay methods, jogging control, dynamic and regenerative braking, plugging motor drives.

EL126B Control of A.C. Apparatus Laboratory

A.C. relays and contactors, schematic diagrams and circuit layouts, types of overload devices; A.C. motor starters, synchronous motor starters, induction motor starters, reduced voltage starters, line resistance method, autotransformer or compensation method, Wyedelta method; part winding starter, speed control, electric braking.

Elements of the shunt generator, voltage characteristics of a shunt generator, shunt and separately excited generators, components of voltage drop in a shunt generator, rotational losses in a D.C. machine, separation of rotational losses (D.C. generator), efficiency and losses of a shunt generator, the compound generator, efficiency and losses of a compound generator, shunt generators in parallel, compound generators in parallel, direct current booster, direct current shunt motor starting rheostat, operation of a direct current shunt motor, static torque of a D.C. motor, efficiency and losses of a shunt motor, the direct current series motor, the compound motor, the Kapp opposition test, motor generator set.

EL130 Electrical Fundamentals

Electrical and electron theory, laws and applications, symbols and schematics, circuits, wiring practices, motors, transformers, test equipment and analysis, vacuum tubes and transistors.

EL134T Electrical Laboratory

Review of A.C. fundamentals; review of balanced three-phase systems; unbalanced three-phase four-wire wye-connected loads; unbalanced delta-connected loads; unbalanced three-wire wye connected loads; combination unbalanced loads; phasor diagrams; two-watt meter method of measuring power; meter switching circuits; electrical systems; overhead and underground distribution systems; types of distribution systems; system regulation; voltage regulators; lightning arresters; circuit breakers; street lighting system.

EL200 Electric Fundamentals

Ohm's Law, D.C. circuits, power dissipation, magnetism, electromagnetism, A.C. circuits, A.C. power dissipation, inductance, capacitance, impedance, D.C. and A.C. machines, transformers, relays and switching, welding machine trouble-shooting and repair.

EL231T Electrical Control Systems

Direct current relays and contactors, direct current motor control circuits, alternating current relays and contactors, alternating current motor control circuits, logic motor control circuits.

EL232T Alternating Current Machines

Transformer principles; construction of single-phase and three-phase transformers; standard transformer tests; impedance and voltage regulations; parallel operation; transformer connections; construction of alternators; stator windings; rotor windings; impedance; voltage regulations; alternator test and regulation calculations; armature reaction; parallelling; operation of synchronous motors; phasor diagrams; power-factor control; super-synchronous motors; synchronous induction motor; construction of three-phase induction motors; operation of induction motors; starting torque and current; breakdown torque; construction and operation of single-phase induction motors; split-phase starting; shadedpole motors; repulsion motors; single-phase synchronous motors; maintenance of A.C. apparatus.

EL234 Electrical Distribution Systems

Review of A.C. fundamentals; review of balanced three-phase systems; unbalanced three-phase four-wire wye-connected loads; unbalanced delta-connected loads; unbalanced three-wire wye-connected loads; combination unbalanced loads; phasor diagrams; two-watt meter method of measuring power; meter switching circuits; electrical systems; overhead and underground distribution systems; types of distribution systems; system regulation; voltage regulators; lightning arresters; circuit breakers; street lighting system.

EL234T Electrical Laboratory IIIB

Review of A.C. fundamentals; review of balanced three-phase systems; unbalanced three-phase four-wire wye-connected loads; unbalanced delta-connected loads; unbalanced three-wire wye-connected loads; combination unbalanced loads; phasor diagrams; two-watt meter method of measuring power; meter switching circuits; electrical systems; overhead and underground distribution systems; types of distribution systems; system regulation; voltage regulators; lightning arresters; circuit breakers; street lighting system.

EL235 Industrial Electronics

Review of the operation of vacuum tubes and semiconductor diodes and transistors; Zener, Avalanche, and Esaki diodes; field-effect transistors and unijunction transistors; four-layer diodes; photoelectric devices; saturable reactors and magnetic amplifiers; gas diodes, ignitrons, and thryatrons; logic devices.

EL235T Circuit Analysis by Computer

Review of the operation of vacuum tubes and semiconductor diodes and transistors; Zener, Avalanche, and Esaki diodes; field-effect transistors and unijunction transistors; four-layer diodes; photoelectric devices; saturable reactors and magnetic amplifiers; gas diodes, ignitrons, and thryatrons; logic devices.

EL238 Electrical Laboratory

Alternator operation with resistive loads, alternator regulation, alternator regulation (synchronous impedance method), alternator voltage control, alternator efficiency by loading, alternator efficiency by loss measurement, alternators connected to a power system, parallel operation of alternators, operation of synchronous motors, torque-angle characteristics of synchronous motors, V curves and power-factor curves for synchronous motors, power factor improvement with synchronous motors, synchronous-motor efficiency, operation of wound-rotor induction motors, operation of squirrel-cage induction motors, transformer ratio, polarity (A.C. method), polarity (D.C. method), open circuit or core loss test, short circuit test, operation under load, auto-transformer operation.

EL240 Installation and Branch Circuits

Layout of branch circuit wiring for split-phase and three-phase distribution systems, including size and number of conductors and size of conduits for commercial and industrial systems; calculation of loads for lighting and power; panels, also feeders; special calculations for conductor sizes and fuse or breaker protection for motor loads; use of H.E.P.C. safety code and tables; use of copper and aluminum conductors.

EL241 Industrial Electronic Control Systems

Timing circuits; electronic timers; photoelectric relays; light-sensing relays; temperature-sensing relays and temperature recorders; voltage regulators; voltage-sensing relays; motor-speed controllers; position controllers; power rectifiers; resistance welders; electronic heaters; electronic instruments; logic devices; synchros, static stability of servomechanisms.

EL241T Electrical Distribution Systems

Review of alternating current fundamentals; three phase supply systems, phase and line values, power, power factor improvement, balanced and unbalanced systems, types of generating stations and associated equipment; transformer stations, transmission lines, switching stations, types of distribution systems, overhead and underground systems, distribution system regulation, operating characteristics of transformer banks, equivalent circuits and systems analysis.

EL242 Electrical Apparatus

Transformer principles; construction of single-phase and three-phase transformers; standard transformer tests; impedance and voltage regulation; parallel operation; transformer connections; construction of alternators; stator windings; rotor windings; impedance; voltage regulation; alternator test and regulation calculations; armature reaction; parallelling; operation of synchronous motors; phasor diagrams; power-factor control; super-synchronous motors; synchronous induction motor; construction of three-phase induction motors; operation of induction motors; starting torque and current; breakdown torque; construction and operation of single-phase induction motors; split-phase starting; shaded-pole motors; repulsion motor; single-phase synchronous motors; maintenance of A.C. apparatus.

EL242T Industrial Electronic Fundamentals

See description for EL 235.

EL243T Protection of Electrical Equipment

Transformer substation design; grounding arrangement, electrical arrangement, single-and three-line diagram and preparation of a complete bill of material for the substation; relay and control panel layouts and wiring diagrams.

EL244 Wiring Methods and Code

Wiring materials including conduit non-metallic sheet cable, armoured cable, mineral insulated cables, aluminum sheet cables, bussways, wireways, services, residential, commercial, and industrial; devices; fixtures; motors; electrical safety code applications.

EL246 Electrical Laboratory

Laboratory to coincide with topics in EL 241.

EL246T Electrical Laboratory

Alternator operation with resistive loads, alternator regulation, alternator regulation (synchronous impedance method), alternator regulation (A.I.E.E. method), alternator regulation (American Standards method), alternator regulation (two-reaction method), alternator voltage control, alternator efficiency by loading, alternator efficiency by loss measurement, alternators connected to a power system, parallel operation of alternators, operation of synchronous motors, torque-angle characteristics of synchronous motors, V curves and power-factor curves for synchronous motors, power factor improvement with synchronous motors, synchronous-motor efficiency, operation of wound-rotor induction motors, rotary frequency changers, operation of squirrel-cage induction motors, the circle diagram of an induction motor, induction generators, operation of three-phase induction motors on single phase, induction-motor phase converters.

EL247 Electrical Design Applications

Layout of switchboards; distribution systems, low voltage signal systems and electrical heating systems, calculations for lighting layouts and heat loss factors, meters, mechanical design of related electrical equipment and transmission towers, electronic chassis layouts and printed circuits. Complete design drawings for electrical installations for residential, commercial and industrial projects.

EL249 Electrical Specification Writing

Basic concepts of specification writing. Legal use and interpretation of English. Reading working drawings. Legal position of contractor, engineer, architect and client. The legal importance of electrical drawings and relationship to the specification. The importance of electrical codes and approvals. Details of the sections of an electrical specification. Practice in writing a short electrical specification using a completed set of electrical, architectural and mechanical drawings. Specification office procedure.

EL250 Electrical Environmental Systems

Basic concepts of electrical heating as applied to the environment and calculations for electric power loads. Principles of illumination and calculations related to electrical power loads.

EL305 Machine Circuits and Apparatus

Basic fundamentals of D.C. and A.C. circuits, electromechanical control of A.C. and D.C. motors, trouble shooting electromechanical systems with instruments. Thorough understanding of pertinent wiring and schematic diagrams.

EL351 Industrial Electronic Control Systems

Timing circuits; electronic timers; photoelectric relays; light-sensing relays; temperature-sensing relays and temperature recorders; voltage regulators; voltage-sensing relays; motor-speed controllers; position controllers; power rectifiers; resistance welders; electronic heaters; electronic instruments; logic devices; synchros, static stability of servomechanisms.

EL352 Electrical Environmental Systems

Basic concepts of electrical heating and air conditioning as applied to the environment and calculations for electrical power loads. Principles of illumination and calculations related to electrical power loads; acoustics and methods of controlling sound in the environment and calculations of electric power loads.

EL354 Electrical Laboratory

Laboratory to coincide with topics in EL351.

EL362 Electronic Instruments

Instrument errors; statistical analysis of results; standards of measurments; DC indicating instruments; loading effects; potentiometers; DC bridges; AC bridges; oscilloscopes; applications of oscilloscopes; electronic analog instruments; digital instruments; signal generators; waveform analyzers; time and frequency measurement; transducers.

EL363 Closed Loop Controls

Feedback principles, notation and definitions, transform theory; feedback diagrams, nyquist stability, bode, etc.; servos, syncros, servo amp., Ward Leonard system; application, transducers, photoelectric controls, induction and dielectric heating, motor controls, chemical controls.

EL364 Electrical Machine Design

General design procedure; design of single-phase and three-phase transformers; design of polyphase induction motors; design of synchronous machines; design of single-phase motor; design of dc machines.

EL365 Electrical Estimating

Analysis of electrical drawings, take off procedures, pricing, labour cost, adjustments for working conditions and non-productive costs; incidental and direct job costs including electrical heating, analysis of specifications.

EL366 Research Assignment

See description of EL364.

ELDR120 Drafting Fundamentals

Use of instruments, lettering and line work, electronic symbols and use in schematic diagrams, development and production of point-to-point, highway, airline and wiring diagrams. Description of cable forms, wiring harnesses and locking devices, theory and layout of printed circuits and production of printed circuit boards from layouts and artwork, linear and polar graphs, vertical and horizontal bar charts. Use of logarithmic paper. Simple motor control schematics. Two and three wire control.

ELDR120A Drafting Fundamentals (Tutorial)

A tutorial continuation of topics in ELDR120.

ELDR121 Drafting Fundamentals

Graphing, construction and types; pictorial drawing and sketching; design project; orthographic projection(if time permits).

ELDR123 Electrical Drafting

A.C. motor control schematic and wiring diagrams. Control schematics for squirrel cage induction motors, wound-rotor induction motors, synchronous motors. Reduced voltage starting for induction motor. D.C. motor control schematics and wiring diagrams; 3 and 4 point starters. Wiring diagrams: point to point and highway type.

ELDR123A Electrical Drafting 11A(Tutorial)

A tutorial continuation of topics in ELDR123.

ELDR123T Electrical Drafting

A.C. motor control schematic and wiring diagrams for squirrel cage induction motors. Wound rotor induction motor and synchronous motors. Reversing starters, reduced voltage starters. Sequence control for 2 or more motors. Design of simple motor control systems and relay logic.

ELDR124T Electrical Drafting

A.C. motor control schematic and wiring diagrams for squirrel cage induction motors. Wound rotor induction motors and synchronous motors. Reversing starters, reduced voltage starters. D.C. motors control schematic and wiring diagrams. Sequence control for 2 or more motors. Design of simple motor control systems and relay logic.

ELDR233T Blueprint Reading

Architectural symbols and conventions; mechanical symbols; electrical wiring symbols; interpretation of electrical drawings showing commercial and industrial installations; reading of ladder diagrams; conversion from wiring to elementary diagram.

ELDR237 Electrical Drafting

Development of control schematics for complex motor control systems involving interlocking, sequence control, forward reverse control and multispeed starting; including wiring diagrams and electrical layout drawings, motor controls center design.

ELDR243 Electrical Drafting

Transformer substation design; grounding arrangement, electrical arrangement, single and three line diagram and preparation of complete bill of material for the substation; relay and control panel layouts and wiring diagrams.

ELDR248 Architectural & Mechanical Blueprint Reading

Architectural, structural and mechanical symbols and convention; preparation of working drawings from architectural plans, sections, and elevations; interpretation of mechanical working drawings for heating, ventilating, air conditioning, plumbing and piping systems.

ELDR353 Electrical Drafting

Transformer substation design: grounding arrangements, electrical arrangements, single- and three-line diagram and preparation of a complete bill of material for substation; relay and control panel, layouts, and wiring diagrams.

ELTC101 Electrical Fundamentals Advanced

Combination D.C. resistive circuits; power and energy; application of theorems; magnetism; inductance in D.C. application; capacitance in D.C. applications; alternating current; inductance in A.C. applications, capacitance in A.C. applications; principles of L-C-R circuits; power in A.C. circuits, transformers; multiphase A.C. systems.

ELTC102 Electronic Fundamentals Advanced

Networks; L-C-R circuits, impedance, application of theorems, resonant circuits; filters; power supplies.

ELTC102A Electronic Fundamentals Advanced

Networks; L-C-R circuits; impedance; applications of theorems; resonant circuits; filters; power supplies.

ELTC102B Electronic Fundamentals Advanced

A continuation of ELTC102A.

ELTC102C Electronic Fundamentals—Advanced

Network analysis; phasor and advanced vector presentation of L-C-R and impedance networks; resonant circuits, series and parallel, graphic analysis and theorem applications; filters, types, frequency response, measuring methods; multiphase AC systems; generation of Y and delta configurations, phasor and mathematical relations, loading.

ELTC103 Amplifiers and Devices

Vacuum tubes; semiconductors; C.E. analysis, C.B. analysis, C.C. analysis, cascade amplifiers, frequency response, distortion, power amplifiers; semiconductor devices, F.E.T., unijunction transistor, S.C.R. traic, integrated circuits, operational amplifiers, oscillators; Armstrong, Hartley, Colpits.

ELTC103T Amplifiers & Devices

Vacuum tubes; semiconductors; C.E. analysis, C.B. analysis, C.C. analysis, cascade amplifiers, frequency response, distortion, power amplifiers; semiconductor devices, F.E.T., unijunction transistor, S.C.R. traic, intergrated circuits, operational amplifiers, oscillators; Armstrong, Hartley, Colpits.

ELTC104 Advanced Transistors

H parameters in two port networks; H parameters in active two port networks; C.E. circuits, C.C. circuits, biasing and stability; configuration comparisons; transistor ratings; quantitative analysis of cascade amplifier; large signal application, power amplifiers, class A, class B, class AB, integrated circuits; semiconductor devices, analysis of F.E.T. unijunction.

ELTC104A Advanced Transistors

Power amplifiers, class A single-ended, class A push-pull, class B push-pull, class AB; "H" parameters, model analysis based on networks, derivation of fundamental "L" parameters, "L" parameters in CE configurations, "L" parameters in CB configurations.

ELTC104B Advanced Transistors

A continuation of ELTC104A; "L" parameters in CC configurations; configuration comparisons; Q point dependency of the parameters; low, medium high frequency analysis; fixed; effect transistors, JFET, MOSFET, UJT, SCR, TRAIC, SCS.

ELTC105 TV Principles

Basic transmitting principles; receivers (black and white), typical waveform and voltages, fault finding procedures; tuners, I.F.'S. video amplifiers sync separators, vertical and horizontal oscillators, horizontal output stage, picture tubes, sound circuitry; receivers (colour), colour principles, basic circuits.

ELTC108 AM/FM Receivers

Principles of carrier transmission; amplitude modulation properties; receivers; FM stereo multiplex.

ELTC108B AM/FM Receivers Part II

FM receivers; limiters, detectors, de-emphasis alignment principles. FM stereo multiplexing.

ELTC109 Introduction To Motors & Generators

A.C. generators, D.C. generators, D.C. motors, single phase A.C. motors, three phase A.C. motors.

ELTC110 Introduction to Electrical/Electronics

Atomic theory, current flow, potential difference, resistance, OHM'S law, batteries, magnetism, permanent magnet. Induced voltage, transformers, active devices, vacuum tubes, semi conductors.

ELTC111A Applied Circuit Analysis

A tutorial in solving simple passive D.C. and A.C. circuits using the slide rule, and using basic algebraic and trigonometric manipulations in their solution. An introduction to time constants, and to circuits requiring solutions by quadratic equations.

ELTC111B Applied Circuit Analysis II

A tutorial in D.C. and A.C. passive network analysis requiring solutions, by complex algebra and determinants.

ELTC111L Applied Circuit Analysis Laboratory

A computer oriented course to reinforce ELTC111A and ELTC111B applied circuit analysis parts I and II.

ELTC111T Laboratory

Same as ELTC111B but taught using technology mathematics.

ELTC112A Laboratory

Laboratory exercises to reinforce basic principles plus building and testing a motivation project.

ELTC112B Laboratory

Laboratory exercises to reinforce theory lessons plus building and testing student chosen projects based on published information. Project built on printed circuit boards.

ELTC112C Laboratory

Laboratory exercises to reinforce theory lessons plus building and testing student chosen projects based on published information. Projects built on printed circuit boards.

ELTC112T Laboratory

Laboratory experiments for electronic technologists to reinforce the theory taken in ELTC102C, electronic fundamentals advanced, ELTC103T, amplifiers and devices and ELTC104A, advanced transistors.

ELTC114 Laboratory

Laboratory experiments for electrical technologists to reinforce the theory taken in ELTC103T, amplifiers and devices.

ELTC130 Electronics

During this course the student will gain theoretical and practical experience in lab to enable him or her to receive a good grounding in electronic circuitry. The course covers basic D/C circuitry, transistors and transducers calibration and use, lay-out and fabrication of circuits, MYO electrics-basic studies, MYO electric upper extremity prostheses electronic components and their applications and finally A/C theory (Micro Voltages). (48 Hrs.)

ELTC200 AM/FM Receiver Technology

Types of modulation, amplitude modulation, properties, mathematical development; frequency modulation, properties, mathematical development, Bessel curves and tables; receiver circuits, mixers, oscillators, detectors, tuned amplifiers, single, double and cascade amplifiers.

ELTC201 Wave Shaping and Control Devices

Non-sinsusoidal waveforms, harmonic analysis, transient and steady state conditions, wave shaping circuits; switching characteristics; multi-vibrators; control devices, unijunction transistor, S.C.R. Traic, S.C.S.

ELTC202A Logic Systems Part I

Computer arithmetic, signed number arithmetic, logic circuits, Boolean algebra, register circuits, decoder/encoder circuits, arithmetic circuits.

ELTC202B Logic Systems Part II

Computer arithmetic, signed number arithmetic, logic circuits, Boolean algebra, register circuits, decoder/encoder circuits, arithmetic circuits. A continuation of ELTC 202A.

ELTC203 Computer Aided Design

Basic fortran programming; electronic circuit analysis program; PDP8 language.

ELTC203T Computer Aided Design

Basic fortran programming; electronic circuit analysis program; PDP8 language.

ELTC204 Solid State Operational Amplifier Design

Small signal design and analysis of differential amplifiers; feedback amplifiers gain, bandwidth, and distortion considerations; Nyquist and Bode plot analysis of frequency response; operational amplifier parameters; analog and digital applications of operational amplifiers.

ELTC205 Communications Technology I

Communication Systems; noise, definitions calculations, noise expressions; oscillators crystals, crystal oscillators; amplitude modulation; modulating with complex waveforms, A.M transmitter, class B & C signal analysis (Fourier): types of modulation grid, plate, base collector, measurements, antenna matching R.F. power amplifiers class A, B(1), B(2), C(1), C(2); A.M. communication receivers, requirements, R.F. amplifiers, convertor, I.F. amplifier — variable bandpass, detectors; single side band, signal analysis, transmitter, receiver frequency modulation; signal analysis of direct indirect F.M., phase modulation; modulating methods, transmitters, noise.

ELTC207 Advanced Semi-Conductors Devices

H parameters in two port networks; H parameters in active two port networks, C.E. circuits, C.B. circuits, C.C. circuits, biasing and stability configuration comparisons; transistor ratings quantitative analysis of cascade amplifier large signal applications, power amplifiers class A, class B, class AB; integrated circuits semiconductor devices, analysis of F.E.T., unijunction, S.C.R., traic, S.C.S. operational amplifiers ideal and practical circuits.

ELTC208 Pulse Circuits

Non-sinusodial waveforms, harmonic analysis, time constants, transient and steady state conditions, wave shaping circuits, applications; switching characteristics, wave shape definition, switching with active devices; waveform generating circuits and applications, multivibrators, astable, monostable, bistable (discrete and OP, AMP circuits); triggering and steering; Schmitt trigger; other generators, sawtooth; trapezodial, blocking oscillators.

ELTC209 Laboratory

In each course and each area of specialization, laboratory periods will be given. The laboratory exercises have been developed so that they will reinforce the materials given in theory, also, the laboratory exercises emphasize measuring techniques and principles. Because of the ultimate goal in engineering technician training, "Hands On" laboratory training is considered essential and, therefore, this phase of the course is considered to be a major area of study.

ELTC209A Laboratory

ELTC209B Laboratory

In each course and each area of specilization, laboratory periods will be given. The laboratory exercises have been developed so that they will reinforce the materials given in theory, also, the laboratory exercises emphasize measuring techniques and principles. Because of the ultimate goal in engineering technician training, "Hands On" laboratory training is considered essential and, therefore, this phase of the course in considered to be a major area of study.

ELTC210 Digital Principles

Digital arithmetic and coding; basic logic circuits and NOR, OR, NAND, exclusive OR, Flip-Flops, R-S, clocked R-S, D-P type, J-K; Boolean algebra, truth tables, Venn diagrams, Karnaugh maps, deviation of logic equations, practical applications; register circuits, storage, shift, information transfer, counters, adders and subtractors; basic computer system, A/D conversion readouts, multiplexing displays.

ELTC211 Audio Principles

Acoustic fundamentals; elements of audio systems; basic layouts, audio transmission, attenuators and mixers; ultrasonic and audio transducers, microphone, loudspeakers, magnetic heads, optical, sound, measurement; audio transport mechanisms; principles of the Dolby systems; dubbing and editing principles.

ELTC212 Video Principles

Light characteristics; lens characteristics; lens types; color principles and vision; light spectra energy conversion; heat sensitive devices and controls.

ELTC213 Communication principles

Amplitude modulation; AM transmitters and receivers, single sideband theory and transreceiver systems, frequency modulations; direct FM transmitters, phase modulation; FM receivers; data transmission, coupling and terminal.

ELTC215 Communications Systems

Transmission line parameter, types and impedance matching problems; WG parameters, Hardward and Smith chart applications; microwave devices — active and passive (Klystrons, Magnetrons, TWT, Bulk effect devices, Lasers). Basic radar and typical application; multiplex theory and frequency division systems, applications; antenna theory.

ELTC216 Computer Systems

Computer memories; magnetic core, solid state, thin film; machine language programming; peripheral equipment, teleprinters, high speed printers, drum and disk storage units, magnetic tape storage units, card and tape readers, card and tape punchers, numerical displays, graphical displays; analog/digital conversion techniques.

ELTC217 Electronic Laboratory

This course will consist of projects and exercises related to equipment studied in ELTC218. See ELTC209A for department philosophy regarding laboratories.

ELTC218 Electronic Systems and Measurements

Investigation of the principles, applications and limitations of complex electronics instruments, wave analyzers, frequency meters, broad band pulsed sweep oscillators, digital display instruments, recorders and other modern electronic instruments.

ELTC219 ETV/TV Broadcast Maintenance Systems

Video systems and transmitting systems; SYNC generator, pulse distribution, NTSC generator signal, vectorscope, video amplifiers and switches, vertical interva test signal techniques, transmitter analysis and standards, basic CATV system; TV cameras; color and monochrome cameras, image conversion, color and monochrome cameras chain functions, matrixing devices; tape recorders, video tape systems, wideband recording, rotating head principles, telecine theory, film techniques, dubbing systems, telecine chains, film recording of video signals.

ELTC221A Laboratory

Laboratory exercises to reinforce the material given in theory.

ELTC221B Laboratory

Laboratory exercises to reinforce the material given in theory.

ELTC299 Technical Report

Every technician will complete a technical research report. This report is to be of at least 2000 words on a topic of present day technology.

ELTC300 Pulse Technology

Fourier analysis of repetitive waveforms, analysis of high pass C-R networks; analysis of low pass C-R networks; analysis of L-R networks; analysis of L-C-R networks; pulse transformers, ideal and practical; pulse delay lines, parameters, characteristic, response to pulse.

ELTC301 Communications Technology II

Transmission line parameters, propagation constants, high frequency considerations and Smith chart design; RF amplifier design using H, Y and S parameters; microwave active and passive component theory and applications; multiplexing of data signals, frequency and time division theory and design considerations.

ELTC302 Computer Technology

Primary memory circuits, general requirements and types, magnetic core storage, thin film memory solid state memory; central processing units, operation of basic CPU, adressing schemes, other CPU structures — one address, two accumulator, two address no accumulator stack memory timing and control circuits, bus structures, ROM, imput and output control peripherals, types of communication, peripheral devices — magnetic drum, disc, tapes, imput output devices, keyboard/printed, high speed printers, card reader/punch, paper tape reader/punch; CRT displays; analog computers, building blocks, analog computing components — precision potentiometers, operational amplifiers, multipliers, function generators, monitors, problem solving; analog/digital conversion; computer control of industrial processes.

ELTC302 Computer Technology

Primary memory circuits, general requirements and types, magnetic core storage, thin film memory solid state memory; central processing units, operation of basic CPU, addressing schemes, other CPU structures — one address, two accumulator, two address no accumulator stack memory timing and control circuits, bus structures, ROM, imput and output control peripherals, types of communication, peripheral devices — magnetic drum, disc, tapes, imput output devices, keyboard/printed, high

speed printers, card reader/punch, paper tape reader/punch; CRT displays; analog computers, building blocks, analog computing components — precision potentiometers, operational amplifiers, multipliers, function generators, monitors, problem solving; analog/digital conversion; computer control of industrial processes.

ELTC303 Automatic Controls Systems

Feedback principles, notation and definitions, transform theory; feedback diagrams, bode etc.; basic elements of a system, characteristics of a control system, control system components, amplifiers and control elements, analysis of control systems.

ELTC304 System Design Principle (Tutorial)

A tutorial introduction to ELTC304B.

ELTC304B Systems Design Principles Part II

Introduction, systems, sub systems, modules, contractual and non-contractual requirements; design requirements, sub systems made by the same contractor, sub systems made by different contractors; cost, maintenance compatibility, space requirements, warranty, delivery; case study; project selection.

ELTC305 Electronic Mechanical Design Principles

Packaging principles; materials and finishes; machine shop; fasteners; tools; layout; chassis design; cost.

ELTC306 Component Technology

Purpose of course, cost, reliability, environments, standards; components, physics and construction, definitions and ratings, electrical and mechanical limitations, environmental effects, tests, resistors, capacitors, relays, transformers, inductors, fuses, circuit breakers, batteries.

ELTC309A Laboratory

Electronics Laboratory.

ELTC309B Laboratory

Electronics Laboratory.

ELTC310 Advanced Circuit Analysis

Analysis of circuits and driving function using Laplace transforms, Bessel functions, Fourier analysis and Matrix algebra.

ELTC318 Advanced Circuit Analysis

ELTC399 Technology Report

This is a thesis based on the design project undertaken in ELTC304, Systems Design Principles.

ENA170 Enamelling I

Elementary theory and practice — applying enamel to metals. (48 hours).

ENA180 Enamelling II

Enamelling II — Projects include basic holloware — plaques and basic jewellery application, i.e pendants, brooches, etc.

ENA270 Enamelling III

Advanced theory and practice — applications in jewellery. (32 hours).

ENA280 Enamelling IV

Includes course projects — cloissone, champleve, plique a jour.

ENDR102 Machine Drawing And Design

Selection of principal views using third angle orthographic projection drawing system. Sectional and auxiliary views. Graphs and charts. Axonometric drawing systems and dimensioning. Conventional drawing practices. Drawing office standards, dimensioning methods and systems. Preparation of detail working drawings involving tolerances, limits, machine fits and finishes. Machine details such as fasteners, keys, springs, taper pins, and their purposes, selection, and application. Thread systems; terminology, representation, specifications, standards and applications, materials of modern industry; ferrous metals, non-ferrous metals and plastics, SAE numbering system for steel, heat treatment of steel small tool operations. Technical sketching in the orthographic and the isometric systems. Drawing office systems and work routines; filing systems, change notes, design and layout procedures, printing of drawings, print distribution and records, common devices and mechanisms such as springs, cams, gears, clamps, permanent assembly of parts by welding, brazing and soldering. Types of welding, Canadian welding bureau symbols and recommended practices, design of fabricated and welded parts; special design and production techniques for welded products.

ENDR104 Pipe Drafting and Design

Introduction to pipe classification, jointing methods, and pipe fittings. Valves; types, function and design. Representation of pipes, fitting and valves by single and double line symbols, drawing methods; orthographic, developed, oblique, isometric and diagramatic, pipe bending and shop fabrication methods. Piping detail drawing using various techniques, and unit arrangements of manifolds, bypasses, drains and instrumentation connections. Selection of materials and equipment from catalogues. Pipe supports and hangers. Expansion joints and simple flexibility problems, pipe insulation.

ENDR107 Kinematics

Techniques of mechanism analysis, displacement (linear, angular); paths of points on rotating bodies, producing specific paths, ... ages; to produce a given path, basic four ... crank and slider, quick return, reverse, ... motion. Graphic analysis of motion velocity ... acceleration, gear trains, cams.

ENDR113 Technical Drawing

This is a course designed to provide ... student the skills in O/P tracing. Free-hand ... drawing of the human body is specifically ... into this course. Line drawings, geometric ... forms and progressions and isometric ... ings are dealt with, as in blue-print read... regarding machine components. (48 hours.

ENDR115 Structural Drafting

Industrial engineering, history of modern ind... try. Aspects of industrial organization ... management, plant, layout, location and co... struction. Materials handling, production st... inspection, quality control, control of produ... tion, time and motion study, material contr... plant and safety equipment, industrial relation... and incentive payments, personnel selecti... training, human relations and labour organiz... tion.

ENDR118 Descriptive Geometry

Orthographic projection, primary and secon... ary auxiliary views, basic descriptive geometr... principles, points, lines, planes, true lengt... and true shapes found by auxiliary views an... by revolution, skew lines, piercing point of ... line and a plane, development of surfaces ... parallel lines, radial line and triangulati... methods.

ENDR119 Technical Drawing

Review of drafting equipment and instrument... their use, selection and care. Review of ge... metrical constructions, and terminolo... orthographic projection, principal views, pen... techniques, alphabet of lines and basic dimen... sioning. Visualization problems involving mis... ing lines and missing views, principal views ... alternate positions. Advanced detail work... drawings. Sectional views; full, half, offse... removed, and revolved. Conventional practic... and section lining symbols, small tool oper... tions,surface finish, tolerance, dimensioni... problems specifications and notes on dra... ings. The SAE numbering system for steel

Technical freehand sketchings. Welding drawings. Standard welding symbols as authorized by the Canadian Welding Society. Assembly drawings, bills of material and estimating. Manufacturing processes, heat treatment of steels. Electrical and electronic symbols, circuit diagrams and schematic diagrams, symbols for pipe fitting and valves. Piping standards and specifications, piping drawings. Isometric drawing and freehand sketching. The study of industrial blueprints and specifications.

ENDR123 Engineering Drawing and Design

Freehand sketching and machine drafting of various flow diagrams and plant layouts, utilizing standard and specially designed materials; handling equipment as used in industry.

ENDR130 Jig and Fixture Design

Freehand sketching and machine drafting of basic jig and fixture deisgns, emphasizing current production methods and organizations.

ENDR131 Jig & Fixtures Design II ATEC

Prerequisite ENDR130 or equivalent.

Freehand sketching and machine drafting of advanced jig and fixture designs. Emphasizing current production methods and organization.

ENDR132 Jig & Fixture Design III ATEC

Freehand sketching and machine drafting of assembly and welding jigs and fixtures and welding fixtures, emphasizing current production methods and organization.

ENDR134 Tool Design (Jig and Fixtures)

Freehand sketching and machine drafting of various jigs, fixtures, and other tools used in large scale manufacturing.

ENDR140 Die Design

Freehand sketching and machine drafting of basic blanking, piercing and cut-off and bending dies.

ENDR143 Drafting

Introduction to drafting fundamentals, auxiliary views, sections, dimensioning, applied geometry, fastening devices, basic electrical diagrams, blueprint reading, simple cams.

ENDR143A Drafting

ENDR143B Drafting

ENDR158 Drafting and Design

Drafting equipment and instruments, geometrical constructions in common use, one view scale drawings, linework, freehand lettering, orthographic drawings of machine parts, sectional views and auxiliary views, conventional drawing practices, dimensioning of detail parts for manufacture, notes on drawings, machining terms, specifications, pictorial drawings.

ENDR201 Drawing and Product Design

Detail working drawings of an advanced nature. Design layout drawings drawn from engineering information and specifications. Projects involving various types of bearings, cams, and gearing. Use of manufacturers' catalogues, standard parts, and engineering reference books. Manufacturing tolerances, allowances, machine fits and dimensioning systems as related to product design and manufacturing methods. Application of machine components including linkages, toggles, levels, eccentrics. Design principles and applications of basic gauges such as snap, plug. General design principles of jigs and fixtures. Application of commonly used jigs such as drill, plate, etc., and application of machine fixtures, basic principles and applications of structural drawing, checking drawings SAE codes and official specifications.

ENDR202 Manufacturing Processes

A study of the factors which determine the selection of manufacturing processes, casting processes; sand, permanent mould, injection. The forging process. Hot working and cold working, adhesives, powdered metallurgy. Plastics, thermoplastic and thermoset; materials, fundamental characteristics, principles of main processes. Design considerations, selection of materials, production methods and techniques. Welding; welding processes and their applications to product design, production techniques, and materials. Heat treatment of steels, production machine tools. Automatic machine tools used for thread cuttings, gear and cam production, computer control of machine tools. Sheet metal and heavy plate fabrication. Design and cost factors of production. Inspection and quality control. Assembly and testing. Visit to manufacturing plants and industrial organizations will form a comprehensive part of this course.

ENDR204 Design and Layout of Piping Systems

Arrangement of piping systems for steam, water, gas, oil, chemicals, using conventional layouts and interpretation of the relevant codes. Layout of equipment, pressure vessels and related piping in terms of efficient flow conditions, and clearance from structural features. Flexibility studies and arrangement of hangers, guides and anchors, pipe sizing and pressure drop calculations. Special applications for control valves, study of common operations, feed heating, condensing, evaporation, estimation of piping costs. Visit to industrial piping installations.

ENDR222 Descriptive Geometry

Principles and applications involving oblique surfaces, lines and points in oblique planes. Location of plane figures in oblique planes. Intersections of lines and planes, oblique lines, oblique plane and polyhedron, dihedral angles. The system of revolution for finding true length of oblique lines, true shape of oblique planes, dihedral angles. Use of counter revolution. Development of surfaces and intersected polyhedrons by triangulation. Pattern and development of drawings, bend allowances, semas, and methods of joining. Single curved surfaces, development of transition pieces. Double curved sufaces. Contoured surfaces and practical applications such as ships' sheer drawings, problems which pertain to a wide range of general machine and mechanical industries.

ENDR225 Materials and Processes

Study of piping and valve materials, with reference to A.S.T.M. specifications and codes. Welding types and methods. Welding symbols and design considerations. Processes used in food, drugs and petro-chemical industries. Principles of energy systems, atomic fossil-fuelled, and hydraulic pollution control systems. Visits to industrial plant and utilities.

ENDR240 Die Design

Prerequisite: ENDR140 or Equivalent.

Freehand sketching and machine drafting of advanced banking, piercing and bending dies Introduction to basic draw dies.

ENDR241 Tool Design Theory

Manufacturing engineering organization: cutting tool design, form tools, process planning turret lathe, tooling layouts, automatic lathes location and clamping theory, drill jig and fixtures principles, broach design, gauges, presswork, tooling economics.

ENDR242 Die Design

Freehand sketching and machine drafting of basic banking piercing, cut-off, bending, draw and progressive dies.

ENDR250 Industrial Engineering

The selection process of manufacture and case histories of materials handling, plant layout, product flow, cost analysis and maintenance requirements; the selection of equipment from engineering catalogues.

ENDR340 Die Design

Freehand sketching and machine drafting of advanced draw dies and complex bank, pierce and ben progressive dies.

ENG100 Language and Communications

Oral and written communication, the development of clear, concise, well organized communication with specific application to technical writing and oral presentations. Assigned readings. Development of logic and ideas. A study of the literature of the related technology. Written and oral presentations.

ENG100A Language & Communications

ENG101 Language and Communications

The form and punctuation of letters; the purposes and qualities of business letters; letters of inquiry, answers to inquiry, order, claim and adjustment, credit, and collection; the memorandum report; oral communication: panels and debates.

ENG102 Language and Communications

The form and punctuation of letters; the purposes and qualities of business letters; letters of inquiry; answers to inquiry, order, claim and adjustment, credit and collection; the memorandum report; oral communication; panels and debates.

ENG103 Language & Communications

This course in English is offered essentially in two sections: (1) communication, and (2) literature.

Communication covers reading and writing reports, learning techniques, communication of ideas, public speaking and the structure of the essay.

The literature section covers novel, short stories, and films. (32 Hrs.)

ENG104 Business Communication

The qualities of business letters: the positive tone, the reader-oriented attitude, and the basic requirements of business communication; analysis of specific letters; request, response and acknowledgment, order, claim and adjustment; the formal report.

ENG105 English & The Legal World

ENG106 English & The Legal World

ENG107 Business Communications

Will provide the student with an understanding and a basic knowledge of business communications including technical reports, correspondence, memoranda, verbal communications, resumes, agendas.

ENG109 Language & Communications

In the first year, a course in English is offered to all students. Although there is flexibility in course content as determined by each master and class, the first year is essentially divided into two sections: (1) Communication, and (2) Literature.

Communication covers reading and writing reports, learning techniques, communication of ideas, public speaking, and the structure of the essay.

The literature section covers novel, short stories, and films, (96 hrs.)

ENG110 Language and Communications

If necessary, some time will be given to the basics of writing good English. Included are the uses of effective, simple, direct language and remedial work on sentence and paragraph construction, punctuation, vocabulary and spelling. Several types and styles of business letters will be covered.

ENG111 Language and Communications

Oral work, informal and formal reports will be stressed. The subject matter will be from the Residential Property Management area.

ENG112 Business Communication

Written communications in business, business research and writing, effective communication, interpersonal communications.

ENG151 Technical Report Writing

Review basic grammar and composition as required. Oral skills; employment interview, panel discussion, giving a talk. Economic, sociological and psychological factors influencing fashion.

ENG152 Vocabulary Of Furnishings I

Basic and oral skills, factors influencing fashion cycles, furniture terminology.

ENG162 Language Of Furnishings II

Manufacturers of fashion, apparel mass media and furniture terminology.

ENG181 Technical Report Writing II

Review basic grammar and composition as required. Oral skills: employment interview, panel discussion, giving a talk. Economic, sociological and psychological factors influencing fashion.

ENG200 Language And Communications

The preparation and delivery of formal talks and lectures on technical subjects. The philosophy of good writing. Technical research; study of basic library resources used in research. The technical report; organization and format. Assigned reading.

ENG200A Language & Communications

ENG200B Language and Communications

ENG201 English & The Business World

Vocabulary; grammar; punctuation; credit and collection letters; social and business letters; the memorandum report; oral communication.

ENG204 Business Communication

A review of fundamentals; the job getting process; a statistical report; a memo series; letters; planning meetings and conferences; oral communication; literature.

ENG205 Language & Communications

This course is intended to provide the student with a vehicle for continuing development in language usage. The principles of public speaking and use of the media are emphasized. (64 Hrs.)

ENG206 Language & Communications

The initial interval of study is a non-option, and is exclusively intended to outline and teach the formal technical report.

During this period, the planning, development and design of the formal research report is described. Emphasis is placed on the significance of the report to the major subject area and to Liberal Studies.
Liberal Studies: The "Electives"

1. In lieu of students continuing in ENG 200, two intervals of electives may be available. The first will begin in October and conclude in February; the second will begin in February and conclude at the end of college term.
2. The electives offered will be the decision of the individual campuses, but must be related to those options outlined in the college calendar under Liberal Studies.
   Thus, under certain circumstances, an appropriate selection of electives may be chosen from the following:
   ES 200: History of Ideas
   ES 201: History of Science and Technology
   ES 203: Psychology
   ES 205: Modern Literature
   ES 211: Twentieth Century Thought and Current Issues
   ES 215: Political Science — Canada
   ES 216: Political Science — World
   ENG 212: Technical Communication
   ENG 213: Oral Communications
   ENG 214: Communication Skills

ENG 211 Language & Communications

Language & Communications

ENG251 Technical Report Writing 111

Students will be studying all aspects of report writing: planning the report; research, data, reasoning; organizing the material; writing the report; the formal report; the application letter. Self-study will be a large part of the course because assignments must be prepared for each week.

ENG251A Fashion In Literature-Business Writing

Literature pertaining to important eras of fashion history; cyclical movement of fashion. Basic Business Communication, ie. letters, memos.

ENG252 Furnishing Terminology III

Emphasis on oral and written technical reports from trade publications. Writing personal resume and letter of application, employment interview.

ENG253 Technical Report Writing

ENG254 Technical Report Writing

ENG255 Technical Report

ENG261 Technical Report Writing IV

Career opportunities in fashion: manufacturing, retailing, advertising. Materials of fashion: textile fibers, leather, fur, trends in current market, psychology of dressing.

ENG262 Furnishing Technical Writing IV

Terminology of the furniture business. (16 hrs.)

ENG332 Business Communication

Emphasis is on becoming involved in the techniques and psychology underlying effective communications and interpersonal relationships. Research projects will be undertaken in co-operation with the major skill area.

ENG300 Report Writing

This is a one semester course comprehensively covering most aspects of writing a major original thesis or report assigned by the electronics department. It will give the student step-by-step guidance in organizing, preparing, and composing a formal report.

ENG401 English And The Legal World

This course will contribute to the development of the highly specialized legal vocabulary required and will also help to generate a first-rate general vocabulary. It will give extensive experience in transcribing accurately from the spoken word and will include punctuation, capitalization, and grammar. It will demonstrate man's view of law and justice as seen by fiction and non-fiction writers. Since the focus of attention is law, the student will be exposed to the extraordinary effect that the law in all its forms — legislative, judicial, ecclesiastical, and military has had on literature. This course will include research on the historical derivatives of current law and study of a manual for court reporting.

ES100 Effective Supervision

This course is designed as an introduction to the role of the supervisor in industry or business. Some of the teaching methods used include the use of case studies, discussion and role playing.

ES102 Instructional Techniques (Optional)

An elective option for those wishing to learn techniques for instructing in theatre arts.

FAB150 Fabrics I

Characteristics of fabrics requiring special knowledge re sewing, ironing, pressing,packing, molding, etc. (32 hrs.)

FAB151 Fabrics, Threads, Supplies

The selection of the right thread with the right needle at the right time; stitches, etc. for various fabrics, etc. (32 hrs.)

FAB152 Fabric I — Characteristics

Fabric testing, specifications, characteristics for special uses.

FAB160 Fabrics II

Further discussion on the variety of textile fabrics used in the apparel industry, including review of fibres, yarns, fabrics, knitting, weaving, dyeing and finishing.

FAB250 Fabrics III

The effect of fabrics on the apparel production process including sewability, effect of steam on shrinkage, use of specialized fabrics.

FAB252 Drapes And Slipcovers I

How to measure and make drapes and slipcovers I. (32 hrs.)

FAB261 Fabrics IV

Bursting, fading, abrasion, other fabrics such as plastics. (48 hrs.)

FAB262 Drapery And Slipcover II

How to measure and make drapes and slip. covers II. (32 hrs.)

FAB361 Fabrics Testing Lab

Fabric Testing, characteristics for specific uses, specifications.

FASH100 Fashion Business Procedures

Basic business knowledge and law; opening a business; licenses; taxes; (role-playing), etc (16 hours)

FASH203 Managerial Accounting

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in a legal office, at an acceptable writing speed.

FASH211 Fashion Business Procedures

Inventory-taking, controls, etc., costing; pricing; sales; laws; consumer information, etc. (32 hours)

FBM200 Food & Beverage Management Projects

The practical application of food and beverage management techniques to real problems through case studies, seminars, workshops, research reports and field assignments.

FDR156 Blueprint Reading and Drafting

An introduction to dimensions, symbols and conventions used in blueprint drawings so that the student would be able to interpret a set of basic blueprints used in hotel or restaurant construction.

FIT100 Introduction to Fitness Testing

The course is structured to provide the students with a background of the human physiological tests that are presently being used in the field. The main emphasis is in testing techniques and the various limitations that are associated with each test.

FIT102 Applied Exercise Techniques

Psychology of exercise studies the components involved in total fitness and how they (social, emotional and physical) interact.

FIT103 Exercise Physiology

The first part of the course will deal with the skeletal muscles biomechanical response to submaximal and maximal exercise. The second part will deal with how the oxygen transporting system responds to changing circumstances especially during exercise and the chronic adaptations that take place in the system due to training.

FIT201 Physical Fitness & Movement Evaluation

This course will study various habits of movement and will concentrate on a more intense analysis of the various tests covered in FIT100. A special section on coronary heart disease will also be covered in this course.

FIT202 Guidelines to Exercise Programming

Both a theoretical and practical approach to group and individual exercise programming will be presented. Basic principles and techniques of activity prescription are related to children, adults, athletes and industry.

FIT203 Cardiovascular Physiology

This course deals with: the functional anatomy of the heart, the blood supply during rest or exercise; the metabolism of the cardiac muscle during exercise; cellular electrophysiology of the heart, and specific forms of heart disease.

FIT204

This course will study the analysis of various movement skills involving the components of biomechanics, physiology and motor development. Programs of exercise will be designed with these components in mind.

FP101 Food Preparation

The four basic stocks, the six basic sauces and their derivatives, the preparation of garnishes and their uses, rice cooking as entrees and appetitives, pasta dishes as entrees and garnishes, the roasting, broiling, steaming, poaching, boiling, deep fat frying and grilling of all meat, fish, poultry and game, egg cookery as entrees and garnishes, salads, and dressings, sandwiches hot and cold, preparation of hot and cold buffet. Cold buffet decoration, the use of herbs, spices and wines in cooking.

FP104 Food Preparation

Through lectures, demonstrations and laboratory assignments, the students will cover cold larder, vegetables, seafood, poultry, meat and offal, soups and sauces, farinaceous products, elementary baking, short order items and non-alcoholic beverages. In the second semester students will become involved in more advanced cold larder, vegetable, seafood, meat, poultry, soup and sauce preparation, as well as advanced desserts and dessert sauces.

FP200 Food Preparation

Advanced culinary techniques and practices following the "Brigade" system of classical kitchen including the following departments:

saucier, garde manger, poissonier, rotisseur, grillardin, entremetier, potager and patissier.

FP201 Food Preparation

A study of consumer demands in establishing parameters for research and development in the area of food products; the manufacturing and packaging used in the fabrication of convenience foods; quality testing; methods of reconstitution, methods of freezing.

FP203 Convenience Foods

A study of the influence of consumer demands in establishing the gross parameters of research and development in the industry. Explanation and study to do with the manufacture and packaging techniques used in the fabrication of convenience foods. Quality testing improvement and convenience requirements.

FR100 Conversational French

This is an introductory course dealing with the use of French in everyday life situations — at school, at work, shopping, travelling, eating out, seeking information, etc. Since this is a beginners' course, it is intended for students who have no previous knowledge of French or those with a limited knowledge of high school French. Students already fluent in French are not eligible for this option. Secretarial Science students will have first priority.

FR101 Conversational French Advanced

Prerequisite: FR100 or acceptable knowledge of French.
Continuation of FR100.

FT100 Food Products and Standards

Food products which are available to, and commonly used in, the hospitality industry are classified and discussed in specific Groups as to their grades, sizes, availability, marketing methods, standard containers, and quality factors; vegetables, fruit, dairy products, cereals, beverages, poultry, fish, shellfish and meats.

FUR146 Consumer Fur Education

A special module covering the recognition of different furs and how they are described for selling purposes — consumer education re fur and fashion. (32 hours)

FUR243 Fur Look-Alikes

Fur recognition using basic dressed and dyed furs made to imitate more expensive species of three families — lambs, felines, rodents.

FUR244 Fur Manufacturing Techniques

Dropping ("Let-out"); geometrics in fur. (48 hours)

FUR245 Fur & Leather Design

Fur and leather patterns, drafting, grading.

FUR247 Fur Buying

The skills and routines needed in buying raw and dressed furs at international auctions.

FUR253 Fur Look-Alikes

Fur recognition as FUR 243 — five families — canine, seals, plantigrades, weasel and miscellaneous.

FUR254 Fur Manufacturing Techniques

Advanced practice in cutting and sewing fur garments, trims with special emphasis on mink, muskrat.

FUR255 Fur & Leather Design

Drafting patterns and grading sizes for fur coats and leather garments — converting cloak patterns for use with fur.

FUR257 Fur Buying

Fur garments; auction sales; international markets. (16 hours)

FURN101 Cabinet and Chairmaking I

The student will make a series of projects designed to cover the basic skills and techniques required in making cabinets and furniture. (64 hours)

FURN102 Wood Machining I

Safety precautions and practices that should be observed will be stressed. Principle operations of the basic woodworking machinery will be practiced. (48 hours)

FURN103 Furniture Finishing I

Surface preparation and basic colour treatments including straining and glazing, hand and spray application of varnish, shellac and lacquer. (48 hours)

FURN104 Upholstery I

Practical elementary upholstery including: sinuous springing, cutting, power sewing, stuffing, fabric application and trimming. (112 hours)

FURN105 Materials I

Studies and discussions on materials used in the furniture industry. (48 hours)

FURN106 Technical Drawing and Blueprint Reading

Introduction to orthographic and pictorial drawing and elementary blueprint reading. (16 hours)

FURN108 Furniture Production Management I

Factory legislation, health and safety measures. Short history of the rise of the factory system. (16 hours)

FURN151 Cabinet and Chairmaking II

The student will make projects designed to add to his basic knowledge and skill of cabinet and chair making. This will include making patterns, veneering both flat and curved surfaces. (64 hours)

FURN154 Upholstery II

Practical upholstery including: Webb and coil springing, fitting fabrics and cushion filling. (112 hours)

FURN155 Materials II

Studies and discussions on materials used in the furniture industry, continued. (48 hours)

FURN156 Technical Drawing II

Intermediate orthographic and pictorial drawing. (16 hours)

FURN157 Furniture Design I

A history of design and evaluation of furniture from earliest times to modern times. (32 hours)

FURN 158 Furniture Production Management II

Communication, method study, work study, production and quality control. (16 hours)

FURN 162 Wood Machining II

Setting up and operating wookworking machinery in such operations as turning, shaping, routing, and making simple jigs will be included in this section. (48 hours)

FURN 163 Woodwork Finishing II

Treatment of surface faults before and after finishing. Stripping and refinishing old furniture. (48 hours)

FURN201 Cabinet and Chairmaking III

The projects that the student will be making in this section are designed to cover the advanced techniques and skills in cabinet and chair making. Simple carving will be included. (160 hours)

FURN202 Wood Machining (with FURN201)

Machining theory and maintenance, and making jigs, saddles and templates. (96 hours)

FURN203 Finishings III

Development of finishing systems. Application and use of special colour treatments including shading, bleaching, distressing. (224 hours)

FURN204 Upholstery III

Practical upholstery including: spring edges, channel backs, tufted backs and fan backs. Field trips to local upholstery shops and factories. (208 hours)

FURN205 Materials III

Studies and discussions on modern materials entering the soft furnishing industry. (16 hours)

FURN206 Technical Drawing III

Advanced orthographic and pictorial drawing. (16 hours)

FURN207 Furniture Design II and Interiors

Standard practices in the design of cabinet work and chair making. The physical relation of people to furniture. (32 hours)

FURN208 Furniture Production Management III

Purchasing, stock control and costing. (16 hours)

FURN209 Style Colour Textile I

Munsel Colour System. (32 hours)

FURN251 Cabinet and Chairmaking IV

The student will make furniture of his own design as well as repair, restore and renovate old pieces of furniture. (160 hours)

FURN254 Upholstery IV

Practical upholstery including: Semi-attached backs, leather or leatherette application, antique restoration and re-styling. Field trips to shops, mills, exhibitions, etc. (208 hours)

FURN255 Materials IV

Materials used in antique upholstered furniture. (16 hours)

FURN256 Technical Drawing IV

Production made and custom made furniture drawings. (32 hours)

FURN257 Design and Interiors IV

The relation and arrangement of furniture to its environment. The student will also originate a project of his own design. (32 hours)

FURN258 Furniture Production Management IV

Small business management, and employer-employee and customer relations. (16 hours)

FURN259 Styles Colour Texture II

Munsel Colour System (cont'd). (32 hours)

FURN260 Costing Estimating (SBM 132)

Estimating the cost of new upholstered furniture. (16 hours)

FURN262 Wood Machining IV

Advanced machinery techniques. Grinding and sharpening of saws, knives, and cutters will be covered as well as mechanical adjustments and minor repairs to wookworking machines. (96 hours)

FURN263 Finishings IV

Special hand and spraying techniques including French polishing, touch-up and restoration of defects in old or damaged finishes. (224 hours)

FURN264 Antique Upholstered Furniture

Studies of antique upholstered furniture and reproductions.

GD100 Still Life Drawing

Using diversified still life objects, drawing exercises will be carried out in various media with emphasis on: composition, line, proportion, shading and textures, in negative and positive form. The application of perspective will be taught in relation to interior renderings and outdoor sketching.

GD101 Life Drawing

A traditional approach to drawing based on the human figure. Understanding various attitudes, positions and movements using contour, gesture, diagramatic and progressive drawing.

GD102 Lettering

A thorough exposure is given, beginning with history, current usage, terminology and family, practical application is the keynote, commencing with pencil, pen, brush and felt tip. Coordinated with knowledge gained, emphasis is placed on devising letters to indicate special effects.

GD103 Design

The students will be taught two dimensional design in which a frame of reference will be used. They will be asked to use geometric and free shapes, arranging these shapes in a way to produce contrast value and textures. Some basic advertising layouts will be executed.

GD104 Science of Colour

An extensive study of the Munsell Colour System will be made. Rendering a colour wheel and producing various colour combinations using this system. Colur value exercises will also be executed.

GD105 Museum Techniques

Using objects d'art, in a series of galleries at the Royal Ontario Museum, various techniques are applied to render commercially oriented projects.

GD106 Mechanicals

How to use materials and equipment to produce geometrical drawings and mechanical artwork. The use of amberlith overlays and keyline methods for camera ready artwork. How to operate the STAT camera.

GD107 History of Art

The students will be taught the basic history of art and how it relates to the present graphic design situation, so that they may use some ideas from history to develop for today's advertising art.

GD108 Illustration Techniques

The use of various commercial techniques such as black and white wash drawings, pen and ink techniques, felt pen techniques and techniques using designers' colours.

GD109 Typographical Design

Instruction will be given in the ordering and application of suitable typefaces, including basic measurements and copyfitting. Felt tip indication is stressed. In the second semester this knowledge will be applied to designing with actual type. Modern equipment is available for photo-composition.

GD111 Studio Graphics

The student will be required to design a newspaper ad using a felt pen for rendering and then produce a finished mechanical drawing. Additional design projects will be carried out using the same techniques.

GD201 Illustration

Concepts in books, magazines, newspapers, T.V. graphics. A course mainly concerning applied art, but also encompassing personal picture making.

GD202 Corporate Design

Students will be encouraged to give free rein to their abstract capabilities in this field of graphic design, with emphasis on corporate images.

GD204 Printmaking

Three methods of screen-making will be taught: Tusche, handcut, photographic, and these methods applied, using suitable inks to print the students' own artwork.

GD205 TV Graphics

Prerequisite: Basic art training.

The student will produce layouts for program titles, commercials, interludes and animation storyboards. Simple T.V. form, studio graphics and 35 M.M. slides. Learning basic techniques in animation, conventional and computer forms from storyboard, creative thinking and actual art.

GD207 History of Art

The Bauhaus School and Art Nouveau are thoroughly examined; their connections with modern advertising. Trends are intensively studied.

GD209 Life Drawing

The various components which make up drawings are explained, interpreted, and put into practice using live models. Students are encouraged to draw naturally rather than from preordained methods of style.

GD211 Studio Graphics

Under studio conditions, students will execute package designs and complete one or two finished art work. In addition each will do a mock-up of an annual report and carry out other graphic design projects.

GD212 Advertising Design

The design of more advanced newspaper layouts, also magazine layouts and a comprehensive advertising folder including the finished mechanical art for the projects. Additional design projects will be carried out as time permits.

GD213 Photographic Design

The basics of cameras and their accessories, films, lighting, dark room techniques and the production of graphic designs using photographs, photograms, and develart.

GD302 Illustration

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum portfolio of drawings on a given topic such as the civil war, developed at the 'A' level. Moving through to multi-media techniques which will be stressed, such as marker, pen, pencil, paint, dyes, paper etc. Each topic selected, for example, Indy 500 car race, will be executed in several media to a situation covering facets with emphasis on spot drawings in black and white and colour.

Problems will pertain to advertising, editorial and institutional illustration when a student elects to take all the A,B,C,D,E, & F levels. Life drawing may be an alternate to other illustration topics for either 3 or 6 hours per week.

GD303 Printmaking

Is offered in two 3 hour increments, A & B to a maximum of 6 hours per week. It is classed as a minor subject in 3rd year. The number of hours devoted to the subject will determine the amount of work covered. At the 'A' level accent is placed on the preparation of artwork and reproduction to the finished stage by screen printing. The 'A' level is a pre-requisite to the 'B' level in which additional photomechanical methods of screen making are carried out using prepared artwork.

GD304 Package Design

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of package design continued from second year with more advanced designs at the 'A' level. Moving through the development of a series of packages for one company to make a family design to a situation covering facets of package design including the introduction of additional techniques such as flexible packaging.

GD305 TV Graphics

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. At the 'A' level, it would be a continuation of art work relating to TV graphics from second year. How to put it together with art work techniques — foreground and background. Additional levels would move through creative story board concepts to sell a product; how to get the most out of animation and going on to a situation covering the following additional facets of TV, graphics, camera and films effects — what animation camera can do for effects, when studied at all A,B,C,D,E and F levels.

GD306 Advertising Design

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of the design, rendering and preparation of advertisements for magazines and newspapers at the 'A' level. Moving through design in a more complex support media such as outdoor advertising, direct mail advertising and transit advertising, facets of the planning of complete advertising campaigns in multi-media (including television) from a marketing strategy. To help provide in-studio conditions, students at all levels are given individual assignments which are designed to complement their own strengths.

GD307 Photographic Design

Offered in two 3 hour increments, A and B, to a maximum of six hours per week. The areas covered will be at advanced level of the camera and its accessories, characteristics of films and lights, chemicals and their functions, film and paper processing in black and white and colour. Dark room techniques, experimental photography, photography applied to package design, T.V. graphics and advertising design. The number of hours devoted to the subject will determine the total work covered.

GD308 Studio Graphics

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of 4 themes; public relations booklet, magazine ad for consumer product, graphic design for liquor bottle at the 'A' level; and expanded through to a situation covering the following facets: concepts, discourse on concept, rough and comprehensive sketches and finished art (creative and mechanical) with special attention to advanced methods in the graphic art field.

GD309 Corporate Design

Offered in 3 hour increments A,B,C,D,E and F to a maximum of 18 hours per week. It may be either a minor or major subject in the third year. The number of hours devoted to the subject will determine the total work covered. It would be a minimum of the research and design of a logo type at the 'A' level. Moving through to the application of the logo type to a letterhead, envelope and business card. Progressing on to other facets such as vehicle signage, book matches and annual reports.

GEM167 Gemmology I

Study of precious stones — cuts, shapes, etc. (32 hours)

GEM177 Gemmology II

Description of principal gem materials, synthetic and imitation stones and organic products.

GEM267 Gemmology III

Study of precious stones — leads to exams of the Gemmological Association of Great Britain fellowship. (32 hours)

GEM277 Gemmology IV

Continuation of GEM 267 (Gemmology III) at a more advanced level and includes use of all gemmology instruments.

GEM367 Gemmology

Basic diamond grading techniques — defining colour, clarity & proportion.

GEM377 Gemmology

Final segment of grading, evaluation of diamonds, including colourless and coloured diamonds and achieving the final price.

GEM467 Gemmology

Study of precious stone — problems relating to repairs.

GEM477 Gemmology

How to use old stones in redesigning old pieces.

GEO100 Forestry & Geology

Classification and recognition of trees and shrubs. Classification and recognition of minerals and rocks. Structural geology, soils engineering reports, cartography. Work of wind, rivers and waves. Glaciation, chronology and economic Geology.

GR100 Layout Design Typography

Basic principles of layout, design, and type face selection, typography in various media; newspapers, books, brochures, advertising, etc. The relationship of typography to other arts, preparation of layouts, copy fitting and mock-up for typesetting and principles of preparation of mechanicals, illustrations and other material for the printer.

GR101 Hot Metal Composition

Principles of type composition. Make-up of jobs using hand composition, Ludlow, saw, mitering machine and reproproof press. Job planning including considerations for printing and binding. Hot metal machines, their mechanisms, and operations. Preventive maintenance and safety regulations, setting of matter justified. Flush left, flush right, centered, leadered work and tabular, proof reading, typesetting a project, which will be printed.

GR105 Photomechanical Reproduction

A basic course covering the operation of process cameras. The calibration of process cameras and darkroom equipment for line, lineline and halftone negatives. The application of coloured filters and use of panchromatic film. Making photographic contacts, duplicates, spreads and chokes. The theory of photographic lenses, light sources, film emulsion and processing solutions.

GR110 Film Imposition & Printing Preparation

A basic course for black and white and line colour stripping. The course introduces job planning and layout of flats containing line negatives, halftone negatives, line colour negatives, halftone negatives, line colour negatives and duotones. Imposition is included with the preparation of folded dummies and layout sheets for various types of bookwork. Darkroom techniques for making photographic contact and the exposing and development of presensitized offset plates are an important part of this course.

GR114 Machine Printing (Letterpress)

Press equipment. Heidelberg Automatic Platen, Model "T" 10" x 15". Heidelberg Automatic Cylinder 15" x 20½". Course covers safety, housekeeping, lubrication, paper handling, press familiarization, set-up and adjustments, feeder and delivery, imposition, register, packing and makeready, letterpress inks, paper stock, running problems and corrections.

GR115 Machine Printing (Basic Offset)

A beginners' course covering the fundamentals of offset lithography, feeding dampening systems (both conventional and alcohol), ink control, and running of one colour and multicolour and process colour projects. This program leads to GR116.

GR115A Machine Printing (ADV Multilith)

Prerequisite:Completion of GR115X or a working knowledge of 1250 multiliths.

Advanced course in offset lithography covering feeding, dampening systems (both conventional and alcohol), colour control. Two multicolour and process colour projects. This program leads to GR116.

GR116 Machine Printing (Offset)

Larger single color presses, good housekeeping and safety, lubrication, measuring instruments and devices for pressmen. Cylinder arrangements. Dampening system, conventional and with alcohol, inking and register systems. Plate, paper and ink as related to the pressman. Successful operation of a single color press.

GR125 Bindery

Introduction to programmable guillotine cutter and basic cutting. Introduction to 17½ X 22½ and 20 X 26 Baum folders and basic folding. Operation of Bostritch 19E hand stitcher. Operation of paper drill and round cornering. Basic hand binding and foil stamping. Handling materials.

GR200A Monotype Keyboard Basic-Intermediate

Prerequisite: Hand composition and typewriting ability to speed of 40 WPM on a ten-minute test.

Monotype keyboard system; this course involves the setting of straightforward matter; flush left; flush right; centered; leaderwork; and balance sheet modes. Persons completing this course successfully should find little difficulty adapting to any keyboard system, which are, if anything, simpler. For those lacking typing skill, attention is drawn to the George Brown College's Lumisonic typing course.

GR202 Photocomposition Keyboard Tape Film

Operation of AKI keyboard, Merganthaler VIP, Daylight processor; and operation of CG7200 display unit. Font grid changing procedures; main memory and width table loading. Correction operation. Basic VIP operating principles and comparison with Photon 713-10/20. Format writing and storage. Routine maintenance.

GR202A Photocomposition-Basic

This course is intended to fulfill the need for training in fundamental typesetting and photo-typesetting concepts before the candidate enters GR202B Photo-composition (operation). The course may also be of value to those employed in typesetting related jobs. Course content: type face recognition, type size recognition, the Printer Pointe System, mark-up fundamentals, typographic style considerations, proofreading, a short history of photo-typesetting, various kinds of computer typesetting systems in use and their applications. The course will be taught by workshop methods as far as possible. Typing skill will be an asset.

GR202B Photocomposition-AKI Keyboards

Prerequisite: Typing to a level of 25 W.P.M. minimum (to obtain employment 50 W.P.M. is usually required, some knowledge of basic typesetting concepts, or permission of instructor.

Special students: employers, salesmen and women, and nonproduction personnel may take this course as special students. Such persons should make known their intention to the instructor at the start of the course and will be given a grade of "K", (failure to follow the above procedure may otherwise result in a grade of "F".) Preference will be given to those seeking employment in the skill of keyboard operating.

This course is an individual learning program in which students may progress at their own speeds. The course covers all the basic machine instructions to the VIP and ranges in difficulty from straight text setting to complex tabular. Some storing and formatting is given.

GR205 Photomechanical Reproduction

An advanced course in halftone photography and machine processing. Includes the operation, maintenance and control of film processors, use of reflection and transmission densitometers. The calibration of various types of contact screens to camera and processing conditions. Making duotones and other techniques. An introduction to colour separation procedures.

GR210 Film Imposition Printing Surface Preparation

Advanced techniques in black and white, line colour and four colour process stripping are introduced. Also included are: contact work and making spreads and chokes, the preparation of various types of offset lithographic plates. Step and repeat methods and an introduction to the programming and operation of a photocomposing machine.

GR214 Machine Printing (FLEXO)

Press equipment is a two-unit "Lembo" flexopress. Course covers safety, housekeeping, lubrication, roll feed and web tension, the printing unit, flexographic process, services on press of air, water, gas and electrical controls, oven drying, roll rewind, circulating pump for inking system, flexo inks and their compatible solvents, ink viscosity measurements, rubber plates, Anilox rolls, ink metering system, position and register, substrates, running problems and corrections.

GR215 Machine Printing (Rotogravure)

Press equipment is a four-unit "Lembo" rotopress. Course covers safety, housekeeping, lubrication, roll feed and web tension, the printing unit, Rotogravure process, services on press of air, water, gas and electrical controls, oven drying, roll rewind, circulating pump for inking system, Toto inks and compatible solvents, ink viscosity measurements, doctor blade finishing, position register, substrates, running problems and corrections.

GR216 Machine Printing (Offset)

Offset lithography on single colour Heidelberg, Harris and Miehle presses at the intermediate level. Course content emphasizes colour matching and projects. Projects run during this course will include one colour, multi-colour and process work.

GR217 Machine Printing (2 Color Offset)

Offset lithography on two-colour Harris and Miehle presses. Fundamentals of two-colour offset lithography, feeding, inking systems, dampening systems, (conventional and alcohol), press familiarization, theory and practical application of two-colour offset printing. This course leads to advanced pressmanship.

GR220 Quality Control

Sampling methods. Statistical probability and inference. Laboratory records. Specifications. Laboratory testing of physical properties of various printing substrates. Laboratory testing of physical and printing properties of various inks. Characteristic curves of films and the effect of varying the conditions of storages, exposure and processing. Safety and environmental factors. Visits to quality control. Laboratories in the graphic arts and related fields.

GR225 Bindery

Intermediate cutting. Intermediate folding and introduction to 26 x 40 Baum folder. Operation of Muller gathering machine. Introduction to Cerlox binding and thesis binding. Introduction to adhesive binding. Job planning.

GR225A Binding & Finishing

See GR125A.

GR225B Binding & Finishing

See GR125A.

GR250 Electronics

Familiarization with electrical systems as applied to graphic arts machinery, followed by simplified electron theory. Theory is applied to a wide range of electrical and electronic devices to enable the student to conduct preliminary trouble shooting using schematics and simple test equipment following proper safety procedures.

GR300 Typographic Design and Layout

Typographic design principles and copy fitting problems followed by production of layouts. Assignments will involve the designing of a set of business stationery, a six page brochure, and a number of tabular items. Each student will be required to formulate a house style in keeping with current trends. All work is produced by the student on the VIP phototypesetter.

GR301 Computer Peripherals and Typesetting

This course develops the ability to apply computers to typesetting. It involves the terminology of computers and discussions of both general purpose and special purpose devices. Each student is required to rewrite a width table for the photon 713-10/20. Pairs of students are sent out to plants employing diverse phototypsetting devices to gather data on which to lead class discussions on the various systems.

GR302 Paste-Up and Film Assembly

Paste-Up is taught at the beginning of this course but the emphasis is one assembly of positive film. Two colour forms are assembled using a register pin system and mylarbase. The level of work reaches that of the leading typesetting houses. In addition, contact printing and headlining are taught.

GR303 Photocomposition Tape Input

Input will be by raw tape perforator, programmable keyboard, and counting keyboard. Correction will be by CRT terminal. In the counting keyboard session, comparisons will be made to the Monotype system. Out-put will be Merganthaler VIP. A high standard of accuracy is demanded of students and the level of work will be in the order of tabular, shape and catalogue typesetting, the final part of this course will be formatting.

GR304 Advanced Keyboard Techniques

The operation and theory of more sophisticated couting keyboards; the uses of programmable keyboards; the advantages and disadvantages of such systems as the monotype keyboard and the dvorak keyboard. The student will be expected to produce several items of work using the monotype, the AKI-PCI 120 and the MPM6 counting keyboard.

GR305 Photomechanical Reproduction

A course designed for students with line and halftone experience. Covers direct and indirect colour separation procedures by various methods. Colour correction by photographic masking. Basic colour theory. Making screened positives and contrast control, using CC filters includes the operation and control of film processors, densitometers, enlarger and related equipment.

GR306 Photomechanical Reproduction

Covers the study of tone reproduction for black and white and colour printing. The manipulation of tones taking into consideration the characteristics of the press, paper, plate, film and processing conditions and the copy to achieve quality reproduction on the printed sheet. practical application of tone reproduction study using camera, enlarger and contacting.

GR307 Photomechanical Reproduction-Gravure

Introduction to reproduction for the Gravure printing process including making of continuous tone negatives and positives, halftone negatives and positives with the Gravure screen for monotone printing. Transparency masking and colour separation for colour. Use of carbon tissue in transferring the image to copper, etching the copper and proofing resulting plates.

GR308 Photomechanical Reproduction-Scanner

Prerequisite: Completion of GR305/Gr306 or equivalent trade knowledge. Principles of scanning, E & D curve and other sensitometer applications, gradation and colour computer screening, proofing, future trends.

GR310 Film Imposition and Printing Preparation

The emphasis at this level is on four colour process stripping procedures including the preparation of flats containing chokes and spreads, fake colour and colour separation Colour charts are prepared by the student incorporating the various screen angles and tints. Further experience will be gained in manual step and repeat methods and machine photocomposing.

GR311 Film Imposition and Printing Preparation

This course provides for the practical application of all previous courses on this subject in the areas of contacting, stripping photocomposing and job planning. It will also include platemaking problems and their solution and prepress colour proofing methods.

GR312 Film Imposition and Printing Preparation

This is a combination of camera, stripping and platemaking that allows the student a number of choices that include completing a project through camera, stripping and platemaking, or performing practical work in any one or more of these areas.

GR314 Die Cutting & Embossing

Following a refresher or instruction on platen and cylinder press as required, the course will cover die manufacturing processes; die cutting and creasing; perforation slot cutting; plate sinking; hot and cold embossing and a demonstration of foil stamping.

GR316 Machine Printing Two-Colour Offset Press ADV

Register, cylinder arrangements, application of pH, pressroom chemistry, paper, ink, colour matching and densitometer application. Projects run during this course will include two-colour, mult-colour and process colour work.

GR317 Machine Printing Rotogravure ADV

Exercises in two and four colour rotogravure printing.

GR318 Machine Printing Flexo ADV

Projects in Flexographic printing on various substrates.

GR319 Multi-Colour Press Projects

Advanced colour projects on coated and other substrates.

GR320 Process Colour Press Projects

Special individual printing projects selected in co-operation by the student and instructor to develop the student's capability on particular presses. Special attention will be paid to colour control and all aspects of importance in commercial work.

GR322 Cold Type Mark-Up

This course introduces student to various methods of mark-up currently in use. It begins with hotmetal mark-up and then progresses to cold-type mark-up, culminating in mark-up for computer typesetting. The kind of difficulties experienced in the use of different output units will be discussed. Students will be encouraged to develop a mark-up system of their own. All work produced is typeset using the VIP phototypesetter.

GR325 Bindery-Guillotine & 17 x 22 Baum folder

Programmable Guillotine cutters. Baum folders 17 ½ x 22 ½ and 20 x 26.

GR325A Binding & Finishing

See GR125A.

GR325B Binding & Finishing

See GR 125A.

GR326 Bindery

Gathering & Adhesive Binding

GR327 Bindery

Advanced folding. Baum folder 26 x 40 and Stahl combination Buckle/Knife folder.

GR328 Bindery

Muller automatic stitcher/Trimmer, Christensen Gang Stitcher, and Hand Stitchers.

GR329 Bindery

Sewing machines and rounding/backing machines.

GR330 Bindery

Major in bindery. Techniques in set-up and trouble shooting are covered in each course. A minor option in bindery consists of parts of courses GR324, GR326, GR327 and GR328.

GR350 Graphic Arts Administration Processes

Cost estimating and production control techniques are covered in a case study approach with a dummy corporation establishment. This subject prepares a student to enter estimating and production control.

GR351 Technical Report Writing

A major technical report is required related to a technical aspect of the area of major specialization. Techniques, report writing and direction in research methods will be provided by the academic division.

HBE400 Human Behaviour Ethics And Legal Implication

Focuses on the legal and ethical responsibilities and rights of the nurse, patient and health agency in critical situations and on the psychological reactions of persons undergoing stress.

HEAL101 Athletic Injuries

This course will deal with subject material in Red Cross standard first aid in the first semester. The second semester will consider recognition, evaluation and treatment of common athletic injuries.

HEAL201 Guidelines for Activity-Special Cases

This course will expose the students to guidelines of activity and recreation for individuals suffering from physical, neurological and sense-related abnormalities.

HEAL202 Advanced Exercise Technique

This course develops the students' motor skills in various racquet sports by discussing various training and teaching methods along with actual game experiences.

HEAL203 Business Management Skills

This course will study the business procedures which are involved in running a small business. A special section dealing with human relations will also be covered in this course.

HIND100 Dimensions Of The Hospitality Industry

History; scope; organization; problems of, and opportunities in the hospitality industry. Discussions of the organization, the departmental functions, and the operational difference of various types of hotels.

HIND101 Food Orientation

History; scope; organization; problems of, and opportunities in, the food service industry. Discussions of the organization, the departmental function, and the operational differences of various types of food operations.

HIND104 Menu Planning

The history of menus and their current use as food merchandise catalogue. Planning the well-balanced menu. The classical menu and various menu forms in various food service establishments, the limited, specialty, table D'Hote, A La Carte and cyclical menu planning. Costing and pricing the menu.

HIND105 Menu Planning

The history of menus and their current use as food merchandise catalogue. Planning the well-balanced menu. The classical menu and various menu forms in various food service establishments. The limited, specialty, table D'Hote, A La Carte and cyclical menu planning. Costing and pricing the menu.

HIND106 Front Office I

The organization of the front desk, its importance to the guest and the hotel. A study of the methods, records and routines used in room reservation, guest registration, cash control and guest charges. Practical instruction on all front office equipment, including the key, mail, information and room racks, front office salesmanship and psychology.

HIND107 Front Desk Procedures

The organization of the front desk, its importance to the guest and the hotel. A study of the methods, records and routines used in room reservations, guest registration, cash control and guest charges. Practical instruction on all front office equipment, including the key, mail, information, and room racks, front office salesmanship and psychology, control of "Skippers" and all other problem guests through established credit policies. Extensive instruction in night audit procedures, balancing the day's business through the practical use of the N.C.R. 4200.

HIND108 Mixology

Bar layout and equipment, history and manufacture of alcholic beverages, beverage preparation theory, practical preparation of the bar.

HIND110 Wine Comprehension

The history, mystique and ritual of wines from the standpoint of types, vintages, handling and storage, the techniques of wine service merchandising and preparing of wine menus. The tasting of popular Canadian and imported wines. Identifying the role of wine in cooking and L.C.B.O. regulations regarding service.

HIND112 Dining Room & Lounge Organization

To provide the student with techniques to control staff and equipment for dining rooms and lounges. Develop techniques to assess quality of competition. Establish food and beverage policy, including employee uniforms, grooming forecasting and scheduling. Develop ability to carry out customer relations, supervise service, cash and charge and closing procedures. Recognize good decore and plant layout.

HIND113 Work Experience

Working under the supervision of qualified chefs, the student will be assigned to a kitchen in industry for on-the-job work experience. The student will rotate through each section of the kitchen and be marked on his/her performance in each task assigned.

HIND200 Function Organization

Organization and functions of the banquet department within food services operations and hotels. The Banquet Sales Office, types of banquets, their booking, control, planning, set-up and service procedures. The banquet bar, table arrangements and table settings.

HIND201 Housekeeping

The organization, location, function and importance of the Housekeeping Department. Duties of the housekeeper, inspectress, and maid. Purchase specifications, storage and issue control of linen and other supplies. Cleaning of carpets and walls, the equipment, layout and function of the hotel laundry.

HIND203 Facilities Design & Planning

Discussion of significant points in the planning process for new or remodelled food service operations, including creation of image, critical flow patch analysis, technical drawings and detail, blueprint readings, selection of equipment and communicating these ideas in an over-all food facility layout plan presentation.

HIND204 Facilities Design & Planning

A basic understanding of the principles of service including table setting, order and techniques of service, timing co-ordination, customer relations; flambeed entress and desserts; dining room organization,; wines, spirits and liqueurs.

HIND205 Food & Beverage Service

Both theory and practice in dining room set-up and organization, table arrangements, purpose and use of various dishes, glassware and cutlery. Reservation control. French, Russian and American table service. Taking the order and "selling" the customer. Gueridon cooking and carving of food at the guest's table.

HIND207 Front Desk Procedures

HIND208 Work Experience

The student is introduced to the reality of the food service and hospitality industry by spending one complete day per week as an on-the-job trainee in either a hotel or food complex. The student is able to relate his classroom instruction to actual operating procedures. Guidance and evaluation is given to each student as to his performance and suitability.

HIND209 Work Experience

The student is introduced to the reality of the food service and hospitality industry by spending one complete day per week as an on-the-job trainee in either a hotel or food complex. The student is able to relate his classroom instruction to actual operating procedures. Guidance and evaluation is given to each student as to his performance and suitability.

HIND210 Personnel Management

Responsibility for Personnel Management, types of organizational structures. Establishing job requirements through job analysis, job description, job specification; job classification and job evaluation. The hiring function, recruiting, interviewing and selection. Job performance appraisal. The Human Rights Code and the Employment Standards Act.

HIND214 Hotel Interior Design

Achieving atmosphere through the use of various furniture period styles, colour schemes, window treatment, wall and floor coverings, construction specifications for furnishings which determine price, room decorating and furnishing costs, the guest room layout and floor plan.

HIND216 Management Practice

This student is involved at the department head and management level in the operating of either a hotel of food complex for two days per week. This allows him/her to implement, under supervision, the 1½ years of classroom and laboratory instruction he/she has already received and also gives some practice, under supervision, in managing various areas of a business under actual operating conditions. The student works with the department head and is given extensive exposure to the management responsibility.

HIND217 Management Practice

The student is involved at the department head and management level in the operating of either a hotel or food complex, for two days per week. This allows him/her to implement, under supervision, the I-½ years of classroom and laboratory instruction he/she has already received and also gives the student some practice, under supervision, in managing various areas of a business under actual operating conditions.

The student works along side of the Department Head and is given extensive exposure to the management responsibility.

HIND219 Management Techniques

Management by objectives, organization charts; anticipation and identification of problems, developing and implementing solutions to problems; establishment of policies; planning and evaluation, corrective actions.

HIND220 Equipment & Maintenance

Operating manuals, preventative maintenance programs safety measures; cleaning and care; maintenance reports, service contracts, minor repairs, maintenance logs.

HIND221 Housekeeping

HIND222 Front Office Operation

Based on HIND106, Front Office Operations deals with the control of "Skippers" and all other problem guests through established credit policies. Extensive instruction in night audit procedures, balancing the day's business through the practical use of the N.C.R. 4200.

HIND223 Sundry Services

A study of additional services available to customers of hotels, and food and beverage operations. Evaluation of ownership versus concession, franchise and lease, as to the most suitable method to meet guest needs. Evaluate and develop an entertainment policy. To select, book, control budgets within the entertainment policy. To co-ordinate sundry services and merchandise and sell these additional services to our customers.

HIND224 Hotel Management Projects

The practical application of hotel management techniques to real problems through case studies, seminars, workshops, research reports and field assignments.

HIND225 Facilities Design & Planning

Discussion of significant points in the planning progress for new or remodelled food service operations, including creation of images, critical flow path analysis, technical drawings and details, blueprint readings, selection of equipment and communicating these ideas in an over-all food facility layout plan presentation.

HIST100 Dental Histology & Embryology "A"

During this series of lectures and laboratory assignments, the student will be exposed to the detailed development of the dental tissues from conception to maturity. This course is designed to complement and expand on previous knowledge acquired. This course is designed to familiarize the student with cell cytology and basic tissue histology, which includes epithelial and nervous tissues. Wherever possible, reference is made to the dental structures. (34 hrs.)

HIST400 Dental Histology & Embryology "B"

The program will build on previously acquired knowledge of body tissue, emphasis will be placed on oral histology and embryology including the development of the tooth, its surrounding structures and the salivary glands. (16 hrs.)

HOUS111 Housekeeping

Inform residents of proper garbage disposal procedures; maintain program of litter control; maintain hygenic standards through proper use of materials and methods; maintain a program of positive sign control; e.g. parking, fire lanes, swimming pool; establish and institute program of snow and ice removal; inspect, maintain and control established standards; schedule suite cleaning on turn-over; establish techniques and methods of cleaning; establish cleaning standards and routines.

HR200 Personnel Management

Many graduates from dental programs are expected to assume managerial positions within the labour force. As such, it is expected that they will have competence in dealing with interview techniques, personnel selection, management and adminstration concepts. These areas form the basic background for this program. (17 hrs.)

HT104 Heating

Theory of oil, gas and electric heating systems. Types, properties and characteristics of fuels and other forms of heat energy. Combustion; types, characteristics, principles of heating equipment, and accessories including steam, hot water, forced air and various types of electric systems, installation codes and practices.

HT114 Heating

Flame detection devices, firing systems, firing sequences and programs, logic diagrams, combustion controls: non-programming and programming. Flue gas analysis and boiler efficiency, boilers, valve train assemblies (C.G.A. and C.S.A. requirements), wiring diagrams, muliple hook-up heating. Firing of commercial oil and gas burners, wiring and control design for systems in the laboratory, flue gas analysis and conducting boiler testing.

HUMN101 Humanities "A"

This course is an examination of several contemporary value systems as they contribute to the concept of dignity and freedom, both personal and societal, with particular attention to such notions as human rights and responsibilities, authority and accountability. (55 Hrs.)

HUMN201 Humanities "B"

This course provides the opportunity for discussion and application of the concepts from "Humanities A" to specific issues and situations related to the practice of nursing. This will include exploration of the evolution of the nursing profession, and the rights and responsibilities of the nurse. (55 hrs.)

INS100 Principles & Practice Of Insurance

INS101 Insurance On Property I

INS102 Automobile Insurance

INS200 Insurance on Property II

INS201 Insurance Against Liability

INS202 Loss Adjustments & Claims Settlements

INS205 Property Loss Adjustments

INS206 Casualty Covers

INS207 Burglary & Fidelity Insurance

INS211 Insurance

INST100 Measuring Principles

The theory and basic concepts of measurement of pressure, vacuum, fluid flow, level, temperature. The principles, construction, maintenance of mechanical and pneumatic devices to make the aforementioned measurements. Instruments will be disassembled, assembled and calibrated. Design and fabrication of control loops for measuring levels such as

sight tubes, wet and dry leg utilization of DP cell and zero suppression.

INST100T Measuring Principals

See description for INST 100.

INST101 Electronic Instrumentation

This course reviews basic theory and explores the concepts of pressure level flow and temperature transducers, bridge and potentiometric devices. The application, calibration, operating and maintenance procedures of the following instruments: electronic DP cells, Honeywell Electronik, Leeds and Northrup, models G and H, Taylor temperature transmitter, radiation and thermoelectricity are also covered.

INST101T Electronic Instrumentation

INST102 Piping & Construction Techniques

INST103 Piping & Instrument Laboratory Techniques

This course explores all of the principles of safety in shop practice followed by: use of hand tools, tube fittings, tube bending, pipe fittings, piping practice, hand valve selection, soft and hard soldering.

INST105 Industrial Process Instrumentation

INST108 Instrumentation Fundamentals

Introduction to measurement and control. Pneumatic, mechanical and electrical transducers. Basic theories of automatic control.

INST110 Instrumentation

Applied electrical and electronic theory, pneumatics and hydraulics. The study and application of devices used in orthotic-prosthetics for the testing of anatomical functions and the control equipment related to artificial limbs and braces.

INST112 Applied Control Theory

INST200 Automatic Control Principles I

Process characteristics, responses of components and systems, energy characteristics, the block diagram, open and closed loops, ratio, cascade, remote-set control loops, development of controller actions, proportional, reset, and rate, tuning a loop.

INST200T Automatic Control Principles

See description for INST 200.

INST201 Final Control Elements

Valve positioners, control valve sizing and their proper application, trim characteristics, seating materials, packing materials, cavitation, flashing, diaphragm materials, split body design, V-ball valves, damper motors, I/P converters, electric and hydraulic valve operators.

INST201T Final Control Elements

INST202 Analytical & Environmental Instrumentation

A study of the principles of measurement, application, operation and maintenance of

analytical instruments in the following areas: oxygen analysis, combustion, gas chromatography, pH, conductivity, nuclear radiation, humidity, viscosity, specific gravity.

INST202T Analytical & Environmental Instrumentation

See description for INST 202.

INST203 Computer Control Principles I

Fundamentals and application of analog computers, fundamentals and application of digital computers, input-output devices, and data conversion, programming and application to process control.

INST204 Applied Solid State Electronics

Power supplies, oscillators, multivi-rators, time control, transistor amplifiers, integrated circuits.

INST209A Laboratory

INST209B Laboratory

INST221B Laboratory

INST299 Technical Report

INST300 Automatic Control Principles II

An extension and more intensive study of automatic control Principles I. Exponential lag, step response and frequency response, dead time, lag-step and frequency response, process combination, frequency response method and step response method, controller forms, process and controller combinations, elementary system stability,. the closed loop and disturbances.

INST301 Computer Control Principles II

An extension of computer control Principles I. Interfacing A to D, and D to A conversions, exposure to software and programming, pneumatic and analog computers, fluidic logic and control.

INST302 Systems Design and Construction

Each student must do a series of projects such as: 1) design and fabricate a functional cascade control unit with a control panel; 2) properly install and make operational a complex instrument such as a gas chromatograph; 3) analyse an actual control loop by duplication of its time base on the electronic process simulator; 4) interphase a humidity measuring device to a PDP8 computer.

INST304 Telemetering

INST309A Laboratory

INST309B Laboratory

INST399 Technical Report

INV111 Purchasing and Inventory Control

Establish need; maintain adequate purchase order system; maintain secure stockroom; develop and maintain adequate stock control; maximum and minimum; establish usage records for comparative purposes; evaluate and compare types of competitive products; negotiate service and supplies contracts.

JWL160 Introduction to Jewellery

Planishing; hard soldering; finishing and polishing of precious metals; elementary jewellery repairs; cuttlefish casting; centrifugal casting; models for production methods, etc. (110 Hrs.)

JWL161 Goldsmithing I

Follows JWL 160 to work in gold, plus the use of tools and equipment; basic techniques of cutting, filing and finishing of non-precious jewellery.

JWL162 Gemsetting I

Follows JWL 160 to work in gem-setting. Introduction to setting, manufacture of bezels and claw settings.

JWL163 Engraving I

Follows JWL 160 and DES 169 to work in engraving — engraving of simple lines — straight and curved for preparation of ornamental designs.

JWL163D Casting

Engraving for the beginner transferring design to metal and engraving using simplified techniques.

JWL164 Silversmithing I

Follows JWL 160 to work in silversmithing. Basic techniques of forming, foming, fitting and soldering.

JWL165 Theory of Specialty

Theory related to:
JWL 161 — Goldsmithing I — cutting, filing, etc.
JWL 162 — Gem-setting I — claws, bezel, etc.
JWL 163 — Engraving I — shapes, theory of design
JWL 164 — Silversmithing I — forming, fitting, etc.

JWL171 Goldsmithing II

Practical aspect of speciality. Basic techniques of hand made jewellery including cuttlefish casting, hard soldering, wire bending and fitting work.

JWL172 Gemsetting II

Practical application of speciality. Basic techniques of gem-setting, manufacturing bezels and claw-settings.

JWL173 Engraving II

Practical application of specialty. Continuation of JWL 163 — engraving of straight and curved lines.

JWL174 Silversmithing II

Practical application of specialty. Continuation of JWL 164 — basic techniques — improving finishes.

JWL175 Theory of Specialty

Theory related to:
JWL 171 — Goldsmithing II — casting, wire-bending, etc.
JWL 172 — Gemsetting II — claw settings, etc.
JWL 173 — Engraving II — basic design theory
JWL 184 — Silversmithing II — finishes, soldering, etc.

JWL265 Theory of Specialty

Theory related to:
JWL 261 — Goldsmithing III — centrifugal casting, etc.
JWL 262 — Gem-setting III — plates, stone sizes, etc.
JWL 263 — Engraving III — history of letter styles, etc.
JWL 264 — Silversmithing III — doning, etc.

JWL271 Goldsmithing IV

Practical application of speciality; plating and

etching techniques, making of own alloys according to percentage content of silver, copper and gold.

JWL272 Gemsetting IV

Practical application of speciality; techniques of bead, claw and bezel setting in various metals and styles.

JWL273 Engraving IV

Practical application of speciality; advanced techniques of block, script and Old English letters in various metals.

JWL274 Silversmithing IV

Practical application of speciality; Holloware tableware, using techniques of raising, forging fitting, plenishing, etc.

JWL275 Theory of Specialty

Theory related to practical application of speciality. JWL 271 — Goldsmithing IV — alloys, etc.
JWL 272 — Gemsetting IV — settings, etc.
JWL 273 — Engraving IV — script and letters
JWL 274 — Silversmithing IV — holloware, forging, etc.

JWL361 Goldsmithing V

Practical application of speciality — advanced techniques of etching, niello, inlay and fire building, etc. For experienced goldsmiths only.

JWL362 Gemsetting V

Practical application of speciality. Advanced techniques of coloured stone and diamond setting and different setting techniques.

JWL363 Engraving V

Practical application of speciality. Advanced engraving on domed and curved surfaces such as bowls, pots, trays; includes machine engraving.

JWL364 Silversmithing V

Practical application of speciality. Advanced techniques of raising, plenishing, soldering, assembly of precious holloware.

JWL365 Theory of Specialty

Theory related to:
JWL 361 — Goldsmithing V — niellor, inlays, etc.
JWL 362 — Gem-setting V — stone and diamond settings, etc.
JWL 363 — Engraving V — domes and curves
JWL 364 — Silversmithing V — plenishing, soldering, etc.

JWL371 Goldsmithing VI

Practical application of speciality. Techniques of granulation, inlay, etc. for preparation of final projects.

JWL372 Gemsetting VI

Practical application of speciality. Continuation of Semester V including chanel and gypsy settings for final course projects.

JWL373 Engraving VI

Engraving VI — practical application of speciality. Continuing from Semester V in preparation for final course projects.

JWL374 Silversmithing VI

Practical application of speciality; continuation of JWL 364 in preparation for final course projects.

JWL375 Theory of Specialty

Theory related to:
JWL 371 — Goldsmithing VI — granulation, inlays, etc.
JWL 372 — Gemsetting VI — gypsie and other settings
JWL 373 — Engraving VI — unusual engraving
JWL 374 — Silversmithing VI — plenishing, soldering, etc.

JWL436 Shop General Jewellery

General workshop for repair specialist students. Working on ring sizing, shortening and lengthening of bracelets, chain repairs, etc.

JWL446 Shop

General workshop for repair specialist students. Work on jewellery alteration as new ring shanks and bezels, retipping, etc.

JWL465 Theory Repairs

Theory of repairs for JWL 436 — ring sizing, etc.

JWL466 Shop

General workshop for repair specialist students.

JWL466B Shop

General workshop for repair specialist students — for jewellery students from industry.

JWL475 Theory Repairs

Theory of repairs for JWL 446 — bezels, stopping, etc.

JWL476 Jewellery Repairs

Jewellery repairs — commercial — techniques for volume work.

JWL476B Jewellery Repairs

For jewellery graduates with little industrial experience. Semester 2.

LAB100 Dental Laboratory and Lecture

Course content for courses, LAB 100, LAB 200, and LAB 300. This series of lectures and laboratory exercises is presented to Dental Technology students in Semester 1 through 6. The purpose of these courses is to introduce and familiarize the student with the technology required for the fabrication of the various appliances utilized by the dental profession. Course work in Semester 1, 2 and 3 covers complete dentures, resin and cast, partial dentures and an introduction to bridge work. Precision attachments, ceramics and orthodontic appliances are dealt with in Semester 4, 5, and 6. The program is designed in module units and students proceed on individual learning systems. Field study is incorporated as a formal part of the program.

LAB101 Dental Laboratory & Lecture

Course content for courses LAB 101, LAB 201. This series of lectures and laboratory exercises is presented to denture therapy students in Semester 1, 2, and 3. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized in denture therapy. Course work in Semesters 1, 2, and 3 covers complete denture and resin and cast partial dentures.

LAB200 Dental Laboratory and Lecture

Course content for courses, LAB 100, LAB 200, LAB 300.
This series of lectures and laboratory exercises is presented to Dental Technology students in Semester I through 6. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized by the dental profession. Course work in Semester 1, 2, and 3 covers complete dentures, resin and cast, partial dentures, and an introduction to bridge work. Precision attachments, ceramics and orthodontic appliances are dealt with in Semester 4, 5, and 6. The program is designed in module units and students proceed on

individual learning systems. Field study is incorporated as a formal part of the program.

LAB201 Dental Laboratory & Lecture

Course content for courses LAB 101, LAB 201. This series of lectures and laboratory exercises is presented to denture therapy students in Semesters 1, 2, and 3. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized in denture therapy. Course work in Semester 1, 2, and 3 covers complete denture and resin and cast partial dentures.

LAB300 Dental Laboratory and Lecture

Course content for courses LAB 100, LAB 200, LAB 300.
This series of lectures and laboratory exercises is presented to Dental Technology students in Semesters 1 through 6. The purpose of the course is to introduce and familiarize the student to the technology required for the fabrication of the various appliances utilized by the dental profession. Course work in Semesters 1, 2, and 3 covers complete dentures, resin and cast, partial denture and an introduction to bridge work. Precision attachments, ceramics and orthodontic appliances are dealt with in Semesters 4, 5, and 6. The program is designed in module units and students proceed on individual learning systems. Field study is incorporated as a formal part of the program.

LAB301 Field Work

During the final semester students in Dental Technology are assigned to specific field work situations. These assignments are designed in practicum form and are under the direct supervision of the college. (102 Hrs.)

LAW100 Law & Insurance

A layman's knowledge of federal, provincial and municipal laws affecting the food industry and related insurance requirements; Public Health Act, Innkeepers Act, Fire Safety Act, Workmen's Compensation Act, Employment Standards Act; Public Liability Adjustors, Appraisals, Bonding, Costs and Coverage.

LAW111 Law

Interpret and apply Condominium Act and documents; interpret and apply Landlord and Tenant Act pertaining to residential housing; must be able to comply with Health Standards Act; interpret and apply pertinent sections of municipal, provincial and federal legislation; recognize when to acquire legal help; Qualify legality of Tenancy Agreements; administer covenants of Tenancy Agreement; institute recourse in event of breach of covenant.

LAW200 Business Law I

This two semester commercial Law course is designed primarily for accounting majors who are planning on enrolling in one of the professional accounting associations (RIA or CGA). However, other students will find one or two semesters of this course useful in their business careers.

Topics covered include Corporation Law, Real Property Law, Tax Legislation, Contracts, Labour Law, and Consumer Legislation.

LAW201 Business Law II

This two semester commercial Law course is designed primarily for accounting Majors who are planning on enrolling in one of the professional Accounting Associations (RIA or CGA). However, other students will find one or two semesters of this course useful in their business careers.

Topics covered include Corporation Law, Real Property Law, Tax Legislation, Contracts, Labour Law, and Consumer Legislation.

LAW202 Business Law

Practice and procedure before the various courts in Ontario. Rules of court and pleadings. Rules of evidence, court officials and procedures in court offices and registries and in other registries. The role of the lawyer with respect to the courts, to other lawyers, and to the clients.

LAW203 Business Law

The preparation of a civil or a criminal case for

trial. The law library, legal authority and the analysis of reported cases in such fields as Contract, Tort and Agency, the preparation of legal argument, office practice in such matters as family law, real estate, and briefs before boards and other tribunals.

LAW205 Business Law

LAW206 Hotel Law

LAW207 Food Law

LAW208 Law I Canadian Business Law

Canadian Commercial Law, Business Organization, Law of Contract, Labour Laws, Bankruptcy, Torts.

LAW209 Law II Law of Real Estate

Offer to sell and purchase, mortgages, Condominium Act, Land Speculation Tax Act, Ontario Real Estate Law.

LAW211 Law

Interpret and apply Condominium Act and documents; interpret and apply Landlord and Tenant Act pertaining to residential housing; must be able to comply with Health Standard Act; intrerpret and apply pertinent sections of Municipal, Provincial and Federal legislation; recognize when to acquire legal help; qualify legality of tenancy agreements; administer covenants of tenancy agreement; institute recourse in event of Breach of Covenant.

LTH203 Leather & Suede Types

Recognition of various types, cuts, finishes.

LTH204 Leather Manufacturing Techniques

Advanced practice in cutting and sewing leather coats with and without fur trims.

LTH251 Leather Garments — Marketing

Marketing — how to promote sale of leather garments — market studies — mark-ups.

LTH253 Leather Types

Additional practice recognizing various types, finishes, simulated immitations, etc.

LTH254 Leather Manufacturing Techniques

Usual ways of cutting and sewing leather garments — custom work and finishing

MACH110 Workshop Technology

Measuring tools and benchwork. Theory and operation of the following machines: drill press, bandsaw, lathe, vertical and horizontal mills, surface and cylindrical grinders. Practical heat treat operations, practical projects involve the construction of tools, jigs, fixtures and machines.

MACH120 Toolmaking

Layout procedures, fitting, fastener application, part planning, jig and fixture parts. Milling, welding, grinding and assembly fixtures, drill jigs. Gauges: plug and ring gauges, gap gauges, special gauges. Basic diemaking: die parts and functions, types of press tools, die clearance.

MACH126 Machine Shop

Theory and practical assignment in benchwork, drilling, bandsaw, lathe and milling machine. Exercises using this equipment includes: knurling and thread cutting, use of right-and left-hand tools, cut-off tools and

boring bars. Machine tool sharpening is taken. Projects in this course include centre and pin punches, with the major one being a machined eccentric cam locking prosthetic vise.

MACH204 Diemaking

Punch press theory and operation, press brake theory and operation. Theory development, construction and operation bending, blank, forming, compound, progressive, draw, shaving, lancing, coining and embossing. Cold forming, bulging, swaging, broaching, assembly, subpress, extruding, curling, side cam, horn, moulds — types, construction, operation and manufacture.

MAIN111 Maintenance

Read architectural floor plans and identify pertinent terms and symbols; identify major mechanical and electrical services and locations; demonstrate knowlege of operating principles of major services, water shut-off, breaker panels, circulation pumps, sewer cleanouts, fire lines; maintain a program of sidewalks, driveways and parking areas repair and maintenance; maintain program of exterior building maintenance; evaluate requests for maintenance service; identify emergencies within company policy; recognize minor malfunctions of domestic appliances; establish control procedures for corrective maintenance; institute a maintenance program for outdoor areas, fences, fountains, patios, etc.; maintain record of warrantees; establish and maintain suite maintenance records; establish and maintain building maintenance records; establish and maintain a program of soil, plant and lawn care; schedule suite renovations (occupied suites); establish follow-up procedures on corrective maintenance; establish charge-back system for residents' abuse; schedule suite maintenance on turnover; establish control procedures for preventative maintenance; schedule and implement preventative maintenance programs; administer service contracts common to industry; and establish approved list of contractors emergency service.

MARK100 Introduction to Marketing

An introductory course in modern marketing philosophy and functions. Topics include consumer and industrial market segmentation (identification, needs, market size, trends); Interrelationships between customer, company goals, environmental factors and the marketing mix (product, price, distribution and promotion); and marketing research.

MARK101 The Sales Aspect of Marketing

Your ability to make a personal presentation of yourself, of your ideas, and of your product or service is a valuable aid in all your business contacts.

This ability is enhanced through an understanding of sales planning and sales techniques. Course content includes sales planning and techniques; sales force management and development; recruiting and training, case studies and videotape assistance in developing these skills.

MARK102 Advertising and Sales Promotion

Designed to relate advertising and sales promotional techniques to the marketing environment. Includes target market definition; attitudes, opinions and beliefs; product analysis analysis of communications, media and sales promotion leading to written objectives, strategies and media execution; socioeconomic aspects; The organizations of advertising.

MARK103 Introduction to Marketing Management

Principles of marketing, terminology, marketing concept, nature of the consumer markets of Canada, marketing mis.: product, price, distribution, promotion, identify marketing problems, objectives and strategies.

MARK104 Salesmanship

Sales plannning and sales techniques, sales force management and development, personal presentation of ideas, products.

MARK105 Marketing I

Provides the necessary skills to initiate and evaluate sales and marketing programs within company philosophies. Identifies guest needs and the methods by which hospitality services and products can satisy them. Develops incentive programs, pricing policies and quotas for in-house and external selling programs. Develops initiative to exploit facilities and confidence to combat competition.

MARK200 Product Planning and Pricing Policies

A study of the strategies leading to new product marketing decisions including product planning and development, product strategies, as well as branding, packaging and labelling.

Also includes customer and company considerations in determining product pricing for greater profits.

MARK201 Distribution Channels

This course concentrates on the operations, policies and marketing management of wholesaling middlemen and retailers with particular emphasis on retailers. It then shifts emphasis to consider the channel as a sales system from manufacturer to end user, to identify conflicts and maximize efficiency.

MARK202 Marketing Research and Information

Designed for the user of information rather than for the technical research specialist, the course emphasizes the definition of decision-oriented information needs and the interpretation of information results. Sampling and measurement techniques are included. Text, cases, computer simulation, project.

MARK204 Public Relations

This course defines and explains the role of P.R. for the firm. Topics include the preparation of news releases for all media; the running of press conferences; The development of effective campaigns to stress various aspects of products, individuals and the corporate image; and the handling of all aspects of external communication by the firm, other than paid commercial messages.

MARK205 Marketing Management I

This course, with MARK206, interrelates elements of the marketing mix that were studied separately in previous courses, by comparing various strategies, their underlying causes, and relating these to product and price. Text, cases, computer simulation, project.

MARK206 Marketing Management II

This course provides an intensive survey of management decisions related to marketing planning and strategy, buyer behaviour, distribution and promotional strategies. The study of realistic company cases will provide the student with a deeper understanding of business problems in these areas.

MARK207 Marketing Management III

An interrelated and financial overview of the marketing management function. Emphasis is on the analysis and application of quantitative factors affecting marketing productivity.

MARK211 Advertising & Sales Promotion

MARK212 Advertising and Sales Promotion

MARK213 Marketing II

Provides student with ability to develop an advertising and sales program, evaluates and initiates budget and objectives for advertising and sales promotions. Identifies the various media used for advertising and develops skills of writing copy, designing advertising layouts. Shows how to write brochures, plan direct mail campaigns, conduct sign programs and organize promotional activities

MARK214 Marketing III

An understanding of a public relations policy to bring about a desired image; rapport with media, public relations programs for special groups, employees, local community, government, industry, customers and general public; publicity opportunities, news releases, press conferences.

MATH100 Mathematics

Metric and English measurement, linear equations, quadratic equations, logarithms, trigonometry, oblique triangle, compounded and multiple angles, sum and product of angles, triangles, circles, functional concepts and notations, introduction to series, analytical geometry, differential calculus.

MATH100T Mathematics

Metric and English measurement, linear equations, quadratic equations, logarithms, trigonometry, oblique triangle, compounded and multipe angles, sum and product of angles, triangles, circles, functional concepts and notations, introduction to series, analytical geometry, differential calculus.

MATH101 Mathematics

Review of basic algebra: Significant figures; standard notation; slide rule: graphs; linear equations: ratio and proportion; quadratic equations; simultaneous equations; topology of elementary networks; radian measure; trigonometry.

MATH101T Mathematics

MATH102T Mathematics

Review algebra; functions and graphs; factoring and fractions; quadratic equations; binomial theorem; solution to linear equations; and systems of equations; review of trigonometric functions; J-Operator; vectors and triangles.

MATH103 Mathematics

MATH104 Mathematics

During this course, the student will gain exposure to computation: accuracy and precision, significant digits and mathematical tables. Also covered are fundamental laws of algebra, trigonometry sine law, cosine law and vector application. Linear simultaneous equations, combined with functions and graphs are also offered in the course of study. (32 Hrs.)

MATH105 Mathematics

Slide rule, calculators; practical measurements; practical geometry; ratio and proportions; graphs and nomograms; point system; arithmetic for the printing trades.

MATH106 Mathematics

Semester 1: Computations with measured quantities, metric and English system. Algebra, linear equations, simultaneous equations, quadratic equations, higher degree equations. Logarithms, trigonometry. Right triangle.

Semester 11: Trigonometry: oblique triangle, compounded and multiple angles, sum and product formula for angles, properties of triangles and circles, functional concept and functional notations, introduction to series, introduction to analytical geometry.

MATH107 Mathematics

The objective of this course is to provide the student with a working knowledge of mathematics in order to function in the business world. This course complements the courses in economics and small business management. The course covers basic mathematics, simple interest, discounts, nisms, costing and pricing, taxation, payroll and deductions. (64 Hrs.)

MATH108 Fitness Research Analysis

Computation methods using calculators; basic algebra; linear equations; simultaneous equations; algebraic factoring; quadratic equations, functions and graphs; exponents and radicals; logarithms; metric system of weights, measures, other units and their equivalents; introduction to computer programmes.

MATH109 Mathematics

Semester 1: Performance objectives, basic algebra, linear equations, trigonometry, ratio and proportion, applications in geometry.

Semester 11: Exponents and radicals, linear function, quadratic equations, oblique triangle, applications of numerical trigonometry.

MATH110 Business Mathematics

Basic arithmetic processes, interest, trade discounts, food costs, weights and measures, metric system, ratio and proportion, graphs, recipe quantities, portion costs and selling price calculation, calculation portion sizes and amounts to purchase.

MATH112 Mathematics

Computation methods using calculators; basic algebra, linear equations; simultaneous equations; algebraic factoring; quadratic equations; functions and graphs; exponents and radicals; logarithms; metric system of weights, measures, other units and their equivalents; introduction to computer programs.

MATH113 Business Mathematics

Discounts: markups, margin, markdowns, interest: present value, discounting negotiable instruments, partial payments. Installment purchases: true interest rate on installment purchases. Methods of computation.

MATH114 Business Mathematics

Fundamental algebraic operations, geometric sequences, logarithms, graphs, interest.

MATH115 Business Mathematics

Annuities, amortization and sinking funds, bonds, depreciation.

MATH120 Applied Computer Programming

Introduction to time sharing; algorithms; elements of basic programming; printing statements; functions and sub-routines; basic statements and rules.

MATH136 Mathematics

Basic arithmetic: mensuration; ratio and proportion; fundamental algebra; geometric figures; fundamental geometric construction; trigonometry; sine and cosine laws; oblique triangles; logarithms; shop calculations,

MATH136A Mathematics

MATH136B Mathematics for Watchmakers

Geometric figures: fundamental geometric construction; trigonometry; sine and cosine laws; oblique triangles; logarithms; shop calculations.

MATH200 Mathematics

Analytical geometry, differential calculus, differentiation, practical applications. Integration, the definite integral, areas under curves, volumes, introduction to differential equations. Practical applications

MATH200T Mathematics

Cartesian co-ordinates, line segments inclination, parallel perpendicular lines, straight line distance from a line to a point, circle parabola ellipse, hyperbola tangents to curves, translation of axis second degree equations, polar coordinates, polar equations inequalities, linear programming.

Limits, slope of a tangent derivative, increasing and decreasing functions, derivative of a polynomial, derivative of a product and quotient, chain rule, implicit functions, derivatives with respect to time, maximum and minimum, the differential indefinite intergral, constant of integration, definite integral, trapesoidal rule for approximate areas, areas under a curve, successive integration, volume of integration, centroids, moments of inertia, differential equations.

MATH201 Mathematics

Review of algebra: functions and graphs; factoring and fractions: quadratic and higher degree equations; binomial theorem; solutions to linear equations and systems of equations; review of trigonometric functions; J-Operator; vectors and triangles.

MATH201T Mathematics

Equations of higher degree; progressions, series and binomial theorem; plane analytic geometry; polar co-ordinates and graphs; limits; slope of tangents; derivative; introduction to differentiation.

MATH202 Mathematics

Trigonometric functions of combined angles; properties and graphs of trigonometric functions; plane analytic geometry; Polar co-ordinates and graphs; limits; slope of tangents; derivative; introduction to differentiation and integration.

MATH203 Mathematics

MATH205 Mathematics

Fundamental algebra; fundamental trigonometry; simple and compound interest; basic bookkeeping; profit and loss sheets; cheques, cash records, and statements; taxation; purchasing; financing; estimating.

MATH206

Semester 1: Review of analytical geometry. Introduction to calculus, differential calculus, limits, derivatives, various formulae. Practical applications to refrigeration and heat exchange.

Semester 11: Integration, the definite integral, area under a curve, volumes. Practical problems in refrigeration and air conditioning.

MATH209 Mathematics

Cartesian co-ordinates, line segments, inclination, parallel and perpendicular lines, straight line distance from a line to a point, circle, parabola, elipse, hyperbola, translation of axis, second degree equations, polar co-ordinates, polar equations, applications.

MATH210T Mathematics

Cartesian co-ordinates, line segments inclination, parallel perpendicular lines, straight line distance from a line to a point, circle parabola ellipse, hyperbola tangents to curves, translation of axis second degree equations, polar co-ordinates, polar equations inequalities, linear programming.

Limits, slope of a tangent derivative, increasing and decreasing functions, derivatives of a polynomial, derivatives of a product and quotient, chain rule, implicit functions, derivatives with respect to time, maximum and minimum, the differential indefinite integral, constant of integration, definite integral, trapesoidal rule for approximate areas, areas under a curve, successive integration, volume of integration, centroids, moments of inertia, differential equations.

MATH214 Statistics I

The elements of statistics as applied to business. Treatment of numerical data: graphical representation, the analytic method. Frequency distributions, measures of central tendency and spread. Index numbers, introduction to time.

MATH215 Statistics II

Elementary probability theory, introduction to time series and forecasting. Index numbers and their application.

MATH220 Applied Computer Programming

To teach a second computer language (FORTRAN) and have the students produce programs from the first principle. To show the students how to use FORTRAN on time-sharing. To give assignments using basic FORTRAN applicable to areas of technology the student is pursuing.

MATH300 Mathematics

Differential calculus: Functional notation, gradients, limiting value, differentiation from first principles, maxima and minima, differentiation of products and quotients of trigonometric functions with application to angular velocity and acceleration, simple harmonic motion, and electrical problems. Integral calculus: relationship between differentiation and integration the definite integral. Application of calculus to problems encountered in related technology.

MATH300T Mathematics-Statistics

Elements of statistics, variables and graphs frequency distribution, measurements of central tendency, standard deviation and other measures of dispersion, moments, skewness and normal curve, elementary probability theory, chi-square test, curve fitting and method of least squares, analysis of measurement, nature of samples, sampling distribution, making estimates from samples, application to survey data.

MATH301 Mathematics

MATH301T Mathematics (Matrices)

Indefinite integral; power rule; movement of constants and transforms; definite integral; change of limits; areas under curves; general power formula; basic logarithmic form; basic trigonometric form; hyperbolic form; inverse hyperbolic form; standard form tables for integration; integration by parts; by change of independent variable, by partial fractions; by successive reduction, by substitution, by practical methods, Functions of more than one variable; derivative of a function of more than one variable; total differentiation of a function; multiple integrals; MacLaurin series; Taylor's series; operations with series; computations by expansions; L'Hospital's rule; Cauchy's integral test; alternating series; power series.

MATH303 Mathematics

MATH400 Mathematics

Differentiation of exponential and logarithmic functions with applications related to electrical problems; standard methods of integration, such as substitution, trigonometric identities, partial fractions and integration by parts; radius of curvature, lengths of curves; expansion series; Taylor's and MacLaurin's theorem; differential equations; simple differentiation equations of the first and second order: use of complex numbers in electrical or electronic technology.

MATH406 Mathematics

Consideration of mathematics as applying to basic optics and sensitometry.

MATN401 Maternity Nursing-Practical

This course offers a practical opportunity to apply knowledge, skill and attitudes learned in MATN402 in the nursing care of Maternity Patients. (90 Hours)

MATN402 Maternity Nursing-Theory

MECH100 Mechanics

Statics: concurrent co-planer force systems, resultant forces, equilibrium forces, structural forces, centres of gravity and centroids, moments of inertia, work, energy, and power.

Machines: velocity, acceleration, displacement, laws of motion, Galileo's equations, inertia force, angular motion, work, energy, power, impact.

MECH104 Mechanics

The content of this course will familiarize the student with the following: dynamics, forces and basic principles of mechanics with characteristics and units of force, moments of force are discussed and specific problems in orthotics eg. traction mechanisms and reaction calculation of forces in members of orthotic devices are dealt with in detail. The concluding lectures of the course deal with centroids, with emphasis on the centroid of the human body and its segments.

MECH110 Mechanics of Materials

Semester I — Statics review: forces in structures, stress and deformation, stress and strain. Yong's modulus of elasticity. Riveted and welded joints, torsion.

Semester II — Centroids, moment of inertia. Beams, stresses in beams, deflection of simple beams, thick and thin wall cylinders, combined stresses. Point and distributed loadings, columns.

MECH114 Strength of Materials

This course complements the course MECH100 lectured in the first year. Discussion of mechanics specifically of materials used in O/P fabrication, covering torque and linear stresses in such devices exerted by the human musculature are fully dealt with. (32 Hrs.)

MECH115 Mechanics of Fluids

Properties of fluids: capillarity, viscosity, surface tension, etc. Hydrostatic force and pressure. Centre of pressure, buoyancy and flotation.

Fundamentals of fluid flow — Benoulli's theorem, continuity, orifices, nozzles and weirs. Fluid flow in pipes — Moody chart. Fundamental principles of hydrodynamics. Pumps: types and characteristics. Dimensional analysis.

MECH202 Mechanisms

Techniques of mechanism analysis; graphic analysis of motions; friction and lubrication; lever, pulleys, gears and gear trains, couplings, bearings, clutches, cams, linkages, governors, and speed controls; basic design of mechanisms.

MECH210 Mechanics of Materials

Shear forces, binding moments in beams, cantilevers and continuous beams, reinforced concrete design, structural steel design use of tables.

Selection of sections beams, stanchions, columns, plate girders, riveted, bolted and welded connections, steel roof truss design, joint details.

MECH302 Mechanics & Mechanisms

MECH302T Mechanic and Mechanisms

Properties of materials; stress, strain, and elastic constants; moments of inertia; bending moments; torsion; beam stresses and deflection; Euler strut; column and strut stability; fatigue and fatigue testing; analysis of mechanisms, vibration analysis.

MED100 Oral Medicine

This course is intended to provide general medical information to the hygienist dealing with the public. Students will be familiarized with the etiology and prevention of infectious diseases. Allergy and immune reactions, diseases of the cardiovascular system, blood, lymph and salivary glands. (32 Hrs.)

MET100 Metallurgy

Atomic theory of metals: metallic states, grain formation and growth, metal deformation, mechanical properties, heat treatment of metals, iron-carbon equilibrium diagram, types, properties and uses of cast iron, steel and non-ferrous, aluminum, nickel, copper, magnesium lead and its alloys.

MET130 Metallurgy 1

An introduction to the base metals commonly used in the watchmaking and jewellery trades. A more complete coverage in the precious or "noble" metals, namely the mining, refining and preparation from the raw ores to the finished metals as used by the craftsmen.

An introduction to the acids and liquids commonly used in cleaning, soldering, etc., In each of these affiliated trades.

MET130A Metallurgy I

An introduction to the base metals commonly used in the watchmaking and jewellery trades. A more complete coverage in the precious or "noble" metals, namely the mining, refining and preparation from the raw ores to the finished metals as used by the craftsmen.

An introduction to the acids and liquids commonly used in cleaning, soldering, etc., In each of these affiliated trades.

MET166 Metallurgy I

A special module covering the metallurgy of precious metals used in jewellery manufacturing — Basic. (16 hours)

MET176 Metallurgy II

Continuation of MET166 in Semester 2. (16 hrs.) PAT142 Apparel Design 1
PAT243 Fashion — Research

MET200 Metallurgy

This course is lectured in the second year of the Dental Technology program. The metals and alloys used in dentistry are discussed in detail: structure and state metals and metallic

compounds, physical and mechanical properties of metals, solidification and crystal growth, wrought metals, deformation, recrystallization and grain growth, solid state reaction heat treatment, tarnish and corrosion, gold and its alloys, silver, platinum and copper, base metal alloys and the microscopic structure of alloys. (64 hrs.)

MET266 Metallurgy III

Advanced. Semester III jewellery arts and mature students in Semester V — jewellery repair. (16 hrs.)

MET276 Metallurgy IV

Continuation of MET266.
Semester IV — Jewellery Arts.
Semester VI — Jewellery Repair. (16 hours)

MSN401 Medical Surgical Nursing-Practical

This course provides a practical opportunity to apply knowledge, skill and attitudes learned in MSN402 in the nursing care of adult patients. (83 HOURS)

MSN402 Medical Surgical Nursing-Theory

A review of basic medical-surgical nursing problems in the categories of trauma, neoplasms, degenerative, developmental, metabolic and psychosocial disturbances. (50 HOURS)

NC126 Numerical Control

Numerical control, definition, history of machine tools, advantages and application of NC axis, absolute and incremental systems, point to point and continuous path systems, programming, tooling, tape preparation, binary systems, machine set-ups. Practical applications of two axis machining.

NC208 Numerical Control

Review basic programming procedures. Computer assisted programming using "Adapt" language and XLO post-processor, lathe programming word address, absolute system, practical assignments.

NEO400 Neonatal Intensive Care-Practice

This course provides clinical practice in the nursing care of sick neonate and his family as a basis for developing skill in giving high quality care. (225 hours)

NEO401 Neonatal Intensive Care-Theory

This course provides a study of the high risk neonate and his family as a basis for developing skill and knowledge in giving high quality nursing care to the sick neonate and his family. (220 hours)

NURS101 Nursing Level I

Experience with patients, related to NURS102.

NURS102 Nursing Level I (Lab-Theory)

This first course in nursing introduces the student to the concepts of health and nursing, and includes the development of nursing skills in assisting individuals with activities of daily living, with a special emphasis on communication.(122 hours)

NURS103 Nursing Level II

Experience with patients, related to NURS104. (178 hours)

NURS104 Nursing Level II (Lab-Theory)

The focus is on identifying obvious signs and symptoms of health deviation, and includes further development of the nursing process, and introduction of treatment oriented nursing skills. (70 hours)

NURS 105 Nursing Level III

Experience with patients, related to NURS106. (280 hours)

NURS 106 Nursing Level III (Lab-Theory)

The effects of pathological processes on the adult's ability to care for himself. The related nursing measures are included here with a continued focus on the nursing process, and emphasis on simple nursing situations. (75 hours)

NURS201 Maternity and Newborn Nursing

Experience with patients, related to NURS202. (154 hours)

NURS202 Maternity and Newborn Nursing (Lab-Theory)

The woman in the maternity cycle, the fetus, the newborn, the family are studied in this course, with continued implementation of the nursing process, and introduction of nursing skills specifically related to this area. (40 hours)

NURS203 Medical-Surgical Nursing of Adults

Experience with patients, related to NURS204. (154 hours)

NURS204 Medical-Surgical Nursing Adults (Lab-Theory)

With an emphasis on more complex nursing situations, this course is a continuation of the study of the effects of pathological processes on the adult's ability to care for himself. (40 hours)

NURS205 Medical-Surgical Nursing of Children

Experience with patients, related to NURS206. (154 HOURS)

NURS206 Medical-Surgical Nursing Children Lab-Theory

The nursing of children is the emphasis in this course which focuses on the nursing interventions required in caring for children with deviations from the normal. (40 hours)

NURS207 Psychiatric Nursing

Experience with patients, related to NURS208. (154 hours)

NURS208 Psychiatric Nursing (Lab-Theory)

The focus of this course is on the application of the concepts of mental health, and the principles and concepts of psychiatric nursing. (40 hours)

NURS209 Nursing Level V

Experience with patients, related to NURS210. (245 hours)

NURS210 Nursing Level V (Lab-Theory)

This course is designed to assist the student to consolidate previous learnings, and to apply beginning skills in guiding and directing the care given by other nursing personnel. It serves to facilitate the student's transition from the student to graduate nurse role. (15 hours)

NURS400 Long Term Care of the Elderly (Practice)

This runs concurrently with NURS401. It provides for active participation in varied clinical settings and field visits to community agencies. Working with various health workers contributes to the nurse teacher's understanding of the needs and responsibilities of Registered Nurses in these settings. Particular skills can be further developed through these opportunities. (80 hours)

NURS401 Long Term Care for the Elderly-Theory

Management of the long term care of the elderly includes application of concepts and principles related to the aging process, skills in leadership as well as in competence of nursing technologies.

Resource persons, audio visual media, group activities are used extensively in this course. (40 hours)

NUT100 Nutrition

Nutritional needs for good health. The "Canada Food Rules". Composition of foods and functions of the five groups of nutrients; vitamins, minerals, proteins, fats, and carbohydrates. The function of roughage and water; digestion and metabolism, modified diets to treat various conditions, variations in caloric content, in texture and consistency, and in nutrient composition.

NUT101 Nutrition-A

This course combines a practical approach to nutrition and its theoretical, scientific basis. Basic principles of the metabolism of carbohydrates, proteins, fats, vitamins and minerals will be presented. The application of information will be stressed through discussions and assessments. Students will assess the nutritional adequacy of their own diets. (17 hours.)

NUT103 Nutrition

This course is to illustrate the various methods of determining calorie expenditure for daily occupational and recreational activities. The interrelationships of enzymes, minerals and vitamins will also be discussed with respect to exercise and proper nutrition.

NUT201 Nutrition Counselling

This course will introduce the students to diet therapy. Certain diseases and disorders such as diabetes, gastro-intestinal problems, obesity, cardiovascular disease, etc., will be discussed along with diet therapy used in these disorders.

NUT202 Nutrition-Biochemistry B

This course builds on previously acquired understanding of the basis of nutrition and its role in dentistry. The concepts of biochemistry are introduced, thus enabling the student to come to a fuller understanding of the implications of the diet. (15 hrs.)

NUT203 Nutrition Counselling "C"

In conjunction with the courses PCT201 and NUT202, students receive instruction in diet analysis, and the art of counselling patients in nutrition. Students have an opportunity to apply these principles in individual, supervised counselling sessions. (17 hrs.)

NUT300 Nutrition and Diet

When designing a restoration, the technician must be aware of the on going consequences of his work. Many dental patients present difficult nutritional problems which require special considerations by the dental technician. (15 hrs.)

NUT301 Nutrition & Diet

This is a lecture-seminar course intended to acquaint the student with the role of nutrition in daily living. The importance of food selection and current nutritional problems in the community and the principles and techniques involved in nutrition education in the community.

Learned concepts will be applied at the clinical level. Patients will be interviewed and students will participate in diet sessions. (30 hours)

OM400 Organization and Management

Concepts and practices are analyzed so that students further develop their abilities to communicate, to interact positively with others and to co-ordinate the team effort.

OM401 Organization and Management

Concepts and practices are analyzed so that students further develop their abilities to communicate, to interact postively with others and to co-ordinate the team effort.

OP100 Typewriting & Office Practice

To develop speed and accuracy with emphasis on proper touch typing techniques; introduction to basic centering, tabulation, business letter styles and preparation of manuscripts and proof reading.

OP101 Typewriting & Office Practice

To further develop speed and accuracy on electric typewriters and, in addition, to complete more advanced theory projects.

OP200 Secretarial Procedures

In addition to further skill development, to familiarize the student with the role of the secretary in business organizations and her duties, including communications, filing, banking and finance, meetings and conferences, travel arrangements, etc.

OP201 Secretarial Practice & Word Processing

In addition to further skill development, to familiarize the student with the role of the secretary in business organizations and her duties, including communications, filing, banking and finance, meetings and conferences, travel arrangement, etc.

OP202 Legal Office Practice

Additional to further development of typing skills, emphasis will be placed on the preparation of legal instruments involving court documents, real estate, divorce papers and partnerships and corporations, as well as receptionist, accounting and secretarial duties involved in running a legal office.

OP203 Legal Office Practice

Prerequisites: A good facility in any shorthand, English at the grade 12 level or equivalent, and 45 w.p.m. in typing.

Additional to further development of typing skills, emphasis will be placed on the preparation of legal instruments involving court documents, real estate, divorce papers and partnerships and corporations, as well as receptionist, accounting and secretarial duties involved in running a legal office.

OP204 Medical Office Practice

To further develop typing skills with emphasis on handling the daily routine of a doctor's office including appointments, correspondence, patient files and medical forms, OHIP and Workmen's Compensation forms, and the assignments invloved when part of a hospital dicta typing pool

OP205 Medical Office Practice

To further develop typing skills with emphasis on handling the daily routine of a doctor's office including appointments, correspondence, patient files and medical forms, OHIP and Workmen's Compensation forms, and the assignments involved when part of a hospital dicta typing pool.

ORTH100 Orthodontics

This course is intended to provide the hygienist with the fundamentals of Orthodontics, particularly the recognition of impending dental difficulties including malocclusions, with the objective of providing sufficient information to allow the hygienist to act as a referral agent. (17 hrs.)

ORTH400 Orthodontics

This module is the practical component which expands upon previously learned principles and procedures. The fitting, cementation and removal of orthodontic bands and the placement and removal of arch wires from the basis for instructions. (32 hrs.)

PAED100 Paedodontics

The Dental Hygienist is expected to spend a considerable portion of his/her clinical practice with children. This course will present not only the particular aspects of clinical dentistry as it relates to children but also some of the psychological principles involved in delivery of dental care to the paedodontic patient. (17 hours)

PAT141 Apparel Pattern Drafting I

Elementary pattern design (Women's and Children's wear). A systematic method of pattern cutting by drafting directly "On the flat" (i.e. on paper). (1) Drafting the basic foundation pattern in manufacturing sizes to a "Price Line". (2) Fit and alter patterns. (3) Basic principles of styling; design sketches. (80 hours)

PAT142 Apparel Design I

Styling, line, proportion, research, colour, co-ordinating colour and texture. (32 hours)

PAT144 Fashion Illustration I

Elementary course in fashion art — drawing figures and clothing (still and from life) to show fashion, style design, fabric texture, in preparation for apparel pattern drafting or advertising layouts. (32 hours)

PAT151 Apparel Pattern Drafting

Sequel to PAT141 and 143 — Designing a garment from sketch or original idea and drafting pattern for commercial use - includes creative styling of coats, suits, sportswear, dresswear, advanced styling. (96 hour)

PAT152 Apparel Design II

Styling, research, textiles, copies, size grading up and down. (32 hours)

PAT154 Fashion Illustration II

Commercial applications in fashion art — Creative sketching, line, colour, concepts (fashion). (32 hours)

PAT224 Fashion Illustration

Portfolio of suits, coats, some dresses.

PAT231 Pattern Drafting

Special emphasis on fur trims and body lines.

PAT234 Fashion Illustration IV-Layouts

Continuation of PAT 224 for next semester.

PAT241 Pattern Drafting Changes — V

To include style changes and variations of original design; formal wear; theatre/T.V. design introduction. (32 hours)

PAT242 Pattern Markers, Pattern Layout

Duplicator; miniature markers; optimum use of fabric; introduction to computer pattern grading and markers. (48 hours)

PAT243 Fashion - Research

Tracing trends — co-ordination of colour and fabric with design — textures — attitudes. (32 hours)

PAT244 Fashion Illustration III

Specializing in use of fashion illustration in the media — commercials — ads — display cards — backdrops. (32 hours)

PAT251 Pattern Drafting VI

Grading Techniques; computer pattern grading principles; plotting co-ordinates; grading rules for programming. (32 hours)

PAT252 Apparel Design III — Advanced

Advanced principles of line form and design as

applied to the covering of the human figure; draping; European techniques of creating fashions. (48 hours)

PAT261 Pattern Drafting

Dresses, jackets, bathing suits.

PAT262 Apparel Design

Coats — proportion, colour co-ordination, variations.

PAT271 Pattern Drafting

Additional style variations to PAT 241.

PAT281 Pattern Drafting

Coats — fur trims, leather, etc.

PAT341 Apparel Pattern Drafting VII

Designing and producing a line — Projects and practice designed to develop knack of predicting style change and consumer demand; adjustments needed in design room and on plant floor before showroom display and sales. (64 hours)

PATH100 Oral Pathology "A"

This course is a study of oral disease and oral manifestations of systemic disease. Emphasis has been placed on the recognition or early disease changes so that satisfactory treatment may be instituted. Topics covered include; inflammation and repair, benign and malignant changes, infections, developmental disturbances, and periodontal disease. (17 hours)

PATH101 Pathophysiology & Therapeutic Interventions "A"

This course serves as an introduction to the study of disease, and includes an overview of selected disease processes common to all body systems. Selected diseases common to the clinical setting will be taught in detail. The outline used includes etiology, prevention, incidence, body responses, manifestations, prognosis, and medical therapeutics. There is a major emphasis on Pharmacology as applied to the prevention and treatment of disease. (100 hours)

PATH200 Oral Pathology B

This course complements the course in oral pathology lectured in the first year and includes discussion of developmental disturbances, etiology and course of diseases of the dentition and supporting structures, including those of neoplastic origin. (15 hours)

PATH201 Pathophysiology & Therapeutic Interventions "B"

A continuation of PATH101, this course focuses on some of the more complex diseases affecting adults. (25 hours)

PATH202 Pathophysiology & Therapeutic Interventions "C"

This course relates to PATH101 and PATH201, however the focus is on diseases of children. (25 hours)

PATH203 Oral Pathology "B"

This course complements the course in oral pathology lectured in the first year and includes discussion of developmental disturbances, etiology and course of diseases of the dentition and supporting structures, including those of the neoplastic origin.

PATH205 Psychopathology & Therapeutic Interventions

The focus is on the more prevalent psychiatric disorders of adults, their gross behaviour, disturbances, possible causes, and current forms of therapy. (25 hours)

PATH305 Pathophysiology

This course concentrates on thalidomide, the pathology of muscles; (A) tumors, (B) trauma, (C) torticollisdupuytrens, (D) clubfoot, (E) muscular dystrophy. The pathology of nerves; (A) multiple sclerosis, (B) poliomyelitis, (C) cerebral palsy, (D) spinal cord tumors and trauma, and (E) carpal tunnel syndrome and ganglia.

Pathology and physiology of the circulatory system is lectured covering; (A) idiopathic avascular necrosis of jecur, (B) C.V.A., (C) heart disease. The patho-physiology of the respiratory system also is covered including, (A) chronic bronchitis, (B) asthma, (C) emphysema, (D) pleurisy. To conclude the course, metabolic pathology and diabetes are discussed in detail. The student will have an opportunity to observe autopsies during this course.

PCT101 Pre-Clinical Techniques

Through lectures and practicum experience, the Dental Assistant will become knowledgeable in the clinical functions later to be assumed in professional life. Operating room decorum, instrument identification and four-handed dentistry, materials and procedures, and patient management are the major areas of concentration. (75 hours)

PCT102 Clinical Techniques

In the second semester, in the college clinics and other field placements, the student will apply the Dental Assistant responsibilities learned in the first semester. Field placements include the Faculty of Dentistry, University of Toronto and private dental offices. (170 hours)

PCT200 Pre-Clinical Techniques

During the pre-clinical phase, through lectures and practicum experience, students are taught the principles and procedures involved in obtaining impressions, application of rubber dam, introduction scaling and polishing, the application of anticariogenic agents, and patient management. (40 hours)

PCT201 Pre-Clinical Techniques

During the pre-clinical phase, through lectures and practicum experience, students are taught the principles and procedures involved in oral examination of impressions, application of rubber dam, scaling and polishing, the application of anticariogenic agents, and patient management. (180 hours)

PCT202 Pre-Clinical Techniques

During this period, students provide direct clinical to patients. This experience allows practical training for those principles and techniques learned in the pre-clinical phase. (60 hours)

PCT203 Clinical Techniques

During the second semester and following completion of the Pre-Clinical Program, students in the Dental Hygiene Program will be assigned to supervise clinical sessions at the University of Toronto and the George Brown College Clinics. In their course of instruction, students will provide treatment services to a variety of patients. (204 hours)

PCT401 Pre-Clinical Techniques

In preparation for the modules in restorative pre-clinical techniques, students will review tooth morphology, physiology of occlusion, cavity preparation and classification and the manipulation of restorative materials. Restorative dental procedures and techniques will be taught in individual learning modules. The laboratory sessions comprise a major part of the program. (160 hours)

PCT402 Clinical Techniques

In clinical sessions at the Faculty of Dentistry, University of Toronto, students will participate in rendering clinical services to patients. (160 hours)

PEDN401 Pediatric Nursing-Practical

This course provides a practical opportunity to apply knowledge, skill and attitudes learned in PEDN402 in the nursing care of children.

PEDN402 Pediatric Nursing-Theory

This course develops the knowledge, skill and attitudes necessary to the care of sick children, in the nursing care of children.

PERI100 Periodontics

This course considers the structure and function of the periodontal tissues, the disease processes and predisposing factors which affect these tissues and the various approaches to disease control. (34 hours)

Principles and methodology of periodontal therapy and the role of the preventive Dental Assistant in the area.

PERS211 Personnel Management

PHAR102 Pharmacology & Emergency Care

During this program, the student will be familiarized with the principles of pharmacology and drug therapy, particularly as it applies to dentistry. The student will also be exposed to the procedures to be followed in the event of a medical emergency in the clinic environment. Syncope, cardiac irregularities, haemorrhage, resuscitation and other emergency situations will be discussed. (30 hours)

PHD100 Introduction to Physical Distribution

An introduction to the various components (business areas) that constitute a full physical distribution system, and the role physical distribution plays in today's modern businesses.

PHD102 Physical Distribution Analysis

Managerial tools of analysis, scientific methods, cost, volume analysis, probability concepts, queuing theory, pert system, decision making in production, production planning and controls, and forecasting approaches.

PHD103 Warehousing Management

This course provides an overview of the responsibilities, functions, techniques and tools of modern warehousing.

PHD105 Inventory Control I

Inventory goals and current control techniques, when and how much to order.

PHD202 Physical Distribution Systems-Management I

This is a fully integrative systems course dealing with the sub-systems of physical distribution as well as the entire area of physical distribution.

PHD203 Traffic & Transportation Management I

Overview of traffic patterns, (local, domestic and international), traffic impact on population, urbanization, commodities, environment and its economic impact on the city. Modes and communication. Urban transit and its applications, factors in Canada. Carriers — trucking operations, historical, rates and tariffs, intermodal systems, terminal operations, costing, scheduling, security, computer systems, communications, personnel, insurance, fleet maintenance, customer service, sales, marketing. Consolidation and international trucking operations. Pipelines — development as a mode, economics, cost. Energy resources — coal, gas, oil and their impact on transportation, national and global applications.

PHD204 Industrial Purchasing

The role of purchasing in the modern business organization. Basic purchasing techniques re: supply sources, pricing, negotiation with suppliers, quality control, timing cost analysis and control, make or buy decisions, planning, basic policies, organization.

PHD205 Physical Distribution Systems-Management I

This is a senior integrative systems course; it provides the final co-ordination of all component areas (sub-systems) of physical distribution and of the total physical distribution system with the other areas of an enterprise. Also, major management tools are dealt with extensively and integratively with respect to the physical distribution areas.

PHD206 Inventory Control II

Follows Inventory Control I. Manual and computerized production and inventory control systems and decisions.

PHD207 Traffic and Transportation Management II

Shipping — vessels, regulations, laws, customs, documents, commodities, insurance, port facilities, bulk handling, specialized cargo, containerization, materials handling, and special reference to marine shipping (St. Lawrence Seaway and Great Lakes of Canada), freight forwarding — Commodities, types, documents, modes.

Rail — freight, tariffs, routing, time management, inter-modal applications, management communications and passenger freight.

Air Freight — Types of air cargo planes, commodities, routes, cost, maintenance, warehousing, marketing, rates and documents, hazardous materials, packaging and V.I.P.S.

PHY100 Applied Physics

Properties of matter, fluid mechanics, heat, temperature, expansion of solids, liquids and gasses, heat transfer, optics, illuminations, wave theory, sound acoustics.

PHY100T Applied Physics

Fluids: Properties of fluids, hydrostatics, hydraulics. Heat and thermometry: Temperature scales, types of thermometers, absolute temperature, effects of heat, expansion of solids, liquids and gases, units of heat, specific heat, change of state, heat transfer, gas laws. Sound: Measurement of sound, sonar effects, doppler effect, acoustics. Light: Nature of light, properties of light, optics, lenses, reflection, refraction, wave optics, speed of light, the electromagnetic spectrum, polarization.

PHY102 Applied Physics

PHY105 Physics

Heat, scales and quantities; expansions; specific heat; heat transfer; humidity; specific gravity and density; surface tension; gas laws; osmosis and diffusion; friction and viscosity; elasticity; light; optical instruments; reflection and refraction; photoelectrics; effect of infrared and ultra violet rays on fading surface and metallic colour; spectrum colours; colour mixing; luminosity and brightness; electrostatics and anti-static devices; flash point and safety devices.

PHY106 Applied Physics

Properties of matter, heat and its effects. Gas laws, heat transfer, mechanical equivalent. Introduction to mechanics, concept of force and moments, friction, fluids, pressure, Pascal's Law, Bernoulli's Theorem.

PHY121 Physics

Heat and temperature; properties of matter; chemistry of combustion; heat transfer. force, work, power, simple machines, laws of friction, fundamentals of electricity.

PHY200 Modern Physics

The spectrum; atomic physics, Bohr atom line spectra, waves and particles, atomic model, Chroedinger wave equation, solid state physics, crystalline solids, classification by structure; theory of semi-conductors; nuclear physics, relativity, nuclear particles, nuclear energy.

PHY201T Modern Physics

Heat; scales and quantities; expansions; specific heat; heat transfers; mechanical equivalent of heat; propagation of light; illumination and photometry; mirrors and lenses; photoelectrics; dispersion, interference and differation; sound waves; light and colour; infrared and ultra violet rays; Radio waves.

PHY202 Physics (Thermodynamics)

Energy transformations; definition of terms, the PV diagram, laws of thermodynamics; the gas laws, Joule's engine cycles, engine efficiency, heat transfer, entropy; adiabatic, polytropic.

PHY202T Modern Physics

PHYS104 Physiology and Pharmacology

The purpose of the course is to teach a basic theoretical knowledge of the mechanisms of drug action and to discuss the pharmacology and toxicology of psychoactive drugs.

PM110 Precision Measurement

History and basic principles: Basic instrumentation, dial gauges and test indicators, surface plates, micrometers and verniers, gauge blocks, optical instruments and testing. Surface finish screw threads, gears, angular measurement, fixed gauges, air gauging, autometrology, co-ordinate measurement.

PR200

An understanding of a public relations policy to bring about a desired image; rapport with media; public relations programs for special groups, employees, local community, government, industry, customers and general public; publicity opportunities, news releases, press conferences.

PRAC111 Management Practice

Industry Experience — One Week.

PRAC211 Management Practice

Industry Experience — Two Weeks.

PROJ200 Research Project

PROJ205 Co-op Training in Fitness Field

The students will spend a total of 160 hours in a field placement as a fitness instructor.

PROP100 Introduction to Property Management

Course provides an overview of the whole program. Touch typing techniques, introduction to basic centering, tabulation, business letter styles and preparation of manuscripts and proof reading.

PROP200 Condominium Management

Course will examine in detail the difference between management of rental and condominium accomodation. Students will become familiar with by-laws, declarations and Board of Director functions in a condominium, arrangements, etc.

PROP211 Amenity & Common Area Management

Course will evaluate good management practices and cost control in common areas inside and outside of buildings.

PROS100 Orthotics-Prosthetics Theory

This course lectured in the first year covers the indications and contraindications for use of Symes prostheses, below knee prostheses, patellar tendon bearing orthoses, spinal orthoses and above knee prostheses, alignment and fabrication procedures are fully discussed. Terminology and materials used in making O/P devices are dealt with in details. (32 hours)

PROS101 Materials and Laboratory Techniques

In the first year laboratory, fabrication experience covering all the O/P devices covered in O/P theory are undertaken. Demonstrations of measurements, tracings and castings are given to familiarize the student in this area, and the use of metals, plastics, leathers and fabrics are integral with all projects. Use of machine tools and specific O/P equipment regarding proficiency of operation and safety is on-going throughout the course. (224 hours)

PROS200 Orthotic and Prosthetic Theory

During the third semester the student is further involved with orthotic and prosthetic devices from the point of view of indications and contraindications for use. Other criteria as in PROS100 are fully covered. The devices dealt with are: Ischial weight-bearing, long leg orthoses, silicone Symes prostheses, urathene body jackets, plastic drop foot, orthoses of various types, Milwaukee orthoses, short leg braces (Kienzak). Hip disarticulation and interscapulothoracic prostheses are also discussed. (32 hours)

PROS201 Materials and Lab Techniques

The student continues in this lab course with fabrication of the devices mentioned in PROS200. The course is designed to further develop hand skills. The elective projects allow the student to make full use of time spent in the laboratory. Use of thermoplastic material is particularly emphasized such as vacuum forming. Double vacuum technique in prostheses construction is also an integral part of this course. (208 hours)

PROS203 Field Training

In the third and fourth semesters, students will have the opportunity to visit various private and institutional facilities and observe and participate in the technical aspects of orthotics and prosthetics. The facilities have been carefully selected and a technical course of instructions arranged. The college supervises the course on an on-going basis. (96 hours)

PROS204 Prosthodontics

This course is designed to familiarize the student to the physiological implications of denture prostheses. Considerable emphasis will be placed on prognosis, treatment, planning, and occlusal harmony. (60 hours)

PROS300 Orthotic-Prosthetic Theory

This course is designed for the second year graduate who has been selected to take this optional year. The lectures are clinically oriented, prescription writing and the role of the orthotist and prosthetist on the rehabilitation team plays an important part in its content. The ethical relationship and responsibility of the orthotic prosthetic profession to the public is also discussed. More advanced devices such as myoelectric prostheses and externally powered orthoses are lectured with particular emphasis on patient contact in measurement, casting and fitting. (16 hours)

PROS301 Advanced Lab Techniques

The student during this course will work with patients who act as models for various orthotic

and prosthetic devices. These devices are B/E and A/E prostheses, externally powered reciprocal hand orthoses and the use of newer components used in the O/P industry. Patient fittings with critique will give the student experience in this clinical area. (64 hours)

PROS303 Field Training

This course is designed to allow the maximum clinical exposure for the third year student. Facilities in Toronto and Hamilton are used. The student, under the direction of certified Orthotists and Prosthetists has patient contact in casting, measuring, tracing and fitting of all O/P devices. A close liaison is maintained between the facilities and the college and the course is under the direct supervision of the college. (144 hours)

PROS304 Rehabilitation Medicine

PROS305 Research Project

Each O/P student in the option third year is required to submit, prior to graduation, a thesis researching an elective topic. The topic must have O/P relevance, it will also have practical content. The topics will be selected on an individual basis and every student will designate his or her topic on the last academic day of September of the third year for approval.

The thesis should be approximately 6,000 words in length with a suitable bibliography and should conform to an acceptable standard of presentation, as contained in the booklet, "Outline Guide on Scientific Writing". The research project must be submitted at the end of semesters V & VI for grading. (32 hours)

PSI401 Problem Solving

Students apply the problem solving process to investigate a problem relevant to their practice as operating room nurses.

PSY100 Social Psychology

This course is presented in the first year and is intended to provide the student with an understanding of social institutions and human relationships. It is hoped that through this type of didactics, the student will gain a greater insight into his responsibilities during his or her clinical practice. Subjects discussed include the work ethic, the role of the institution in our society, group dynamics, ethnics and citizenship.

PSY101 Psychology

This course provides the students with knowledge of the basic concepts in Psychology which facilitate the understanding of human behaviour. Content will focus on the development of mental processes, attitudes, emotions, motivation, and factors that influence interpersonal relationships. (90 hours)

PSY102 Introductory Psychology

A brief survey course of various branches of Psychology to provide the student with a basic understanding of human behaviour and some skills in applying this knowledge to day care situations.

PSY103 Business Psychology

Formal and informal organizations. Consumer motivation. Consumer analysis depth interviews, attitude and opinion surveys. Theory of Psycho persuasion.

PSY104 Social Psychology

Main topic areas will include emotions, motivation and personality as they relate to interpersonal relationships among individuals.

PSY105 Psychology for Hospitality

A basic understanding of human behaviour and relationships in society; concepts of motivation; values, attitudes and habits; personalities and their relationship to job functions; the problems of stress and change; prejudice and discrimination.

PSY161 Introductory Psychology

Concepts and theories of Psychology: Learning, motivation, individual differences, application to practical issues in business and personal life, helping the student to understand himself and others.

PSY162 Advanced Psychology

This course, offered to students who have completed an introductory course in Psychology, will examine the basic principles of Social Psychology, such as group dynamics, group behaviour, organizations, etc. These principles will be applied to issues in modern society and industry.

PSY169 Introductory Psychology

Readings and lectures explore some of the findings and developments in the areas of scientific method, perception, learning and motivation, emotion, personality and Social Psychology.

PSY200 Social Psychology

This course is presented in the second year and is intended to provide the student with an understanding of social institutions and human relationships. Subjects discussed include the work ethic, the role of the institution in our society, group dynamics, ethics and human growth and development. (64 hours)

PSY202 Psychology

The structure of this course is to prepare the student to appreciate the needs of amputee and the patient who requires Orthotic management. Its content covers the following: Social Psychology, self-awareness, defense mechanisms. Freudian and Gestalt Psychology is covered. The role of the individual in society as an integrated or frustrated being. The effects of social deviancy related to neuroses and psychoses. In conclusion, personal and group assessments are objectively viewed. (32 hours)

PSY204 Industrial Psychology and Salesmanship

A study of the application of Psychological methods and principles in business and industry, personnel selection, factors involving efficiency. Factors in selling process: buying habits, motives, the pre-approach, the approach, the presentation, the close.

PSY261 Psychopathology of Childhood

Discussions include comparison of normal and abnormal development according to personality theories of Freud and Erikson. Descriptions and functioning of defenses and study of specific categories of disturbance (i.e. Autism, Schizophrenia, etc.)

PSY303 Social and Vocational Rehab

Lectures and visits to clinics will acquaint the student with many aspects of the social and vocational rehabilitation field. Topics include definition of disability and handicap, social roles of the disabled, processes of vocational rehabilitation, functions and types of amputee clinics, network of voluntary welfare agencies — sources of their funds and delivery of health and welfare services, the training role and function of welfare (Social Work), personnel involved in rehabilitation and the administration of funds available to purchase O/P devices. (16 hours)

PSYN401 Psychiatric Nursing-Practical

This course offers a practical opportunity to apply knowledge, skill and attitudes learned in PSYN402 in the nursing care of the psychiatric patient.

PSYN402 Psychiatric Nursing-Theory

The focus of this course is on the application of the concepts of mental health, and the principles and concepts of Psychiatric Nursing. (44 hours)

RBN400 Review of Basics to Nursing

This course examines the health care system in Ontario, the privileges and responsibilities of a Registered Nurse, offers a review of physical, biological and social sciences as well as an introduction to the problem-solving approach to nursing. (72 hours)

REHN400 Rehabilitation Nursing

This is the clinical practice component of the course (Part I). The student is given the opportunity to practice the nursing skills and techniques taught in REHN401. (60 hours)

REHN401 Rehabilitation Nursing-Theory

This course provides Registered Nurses with an opportunity to strengthen their knowledge and understanding related to comprehensive care of the chronically ill and physically disabled person. The rate and scope of nursing in a variety of rehabilitative situations and settings are discussed and/or demonstrated. (60 hours)

REHN403 Rehabilitation Nursing

This is the clinical practice component of the course (Part II). The student will participate with the staff of a clinical agency — observing and practicing the skills she has learned in REHN404. (50 hours)

REHN404 Rehabilitation Nursing — Theory

This course is designed to assist management and other senior nursing personnel to gain a greater knowledge, understanding and skill in relation to the care of the chronically-ill and disabled persons. A variety of modes of delivery of care will be studied and each student will, with direction, investigate a chosen problem or concern. At the completion of the course, students are expected to be skilled not only in the general physical techniques of Rehabilitation Nursing but be able to demonstrate these skills to others. (40 hours)

REL111 Resident Relations

Uphold company policy; avoid personal relationship with residents; deal impartially with residents; communicate with residents; able to educate owners to their responsibility; make resident understand terms of tenancy agreement; advise resident of responsibilities on giving notice; diplomatically deal with lease infractions; deal effectively with pets and children; deal with non-acceptables' life styles; maintain resident discipline; maintain acceptable community environment; carry out eviction procedure; co-ordinate suite turnover; complete incoming and outgoing inspection reports; work within scope of condominium document to protect owners investment; advise Board of Directors of condominiums; take direction from Board of Directors; liase with Landlord and Tenant Advisory Bureau; mediate resident-to-resident relations.

REL211 Resident Relations

Uphold company policy; avoid personal relationship with residents; deal impartially with residents; communicate with residents; able to educate owners to their responsibility; make resident understand terms of tenancy agreement; advise resident of responsibilities on giving notice; diplomatically deal with lease infractions; deal effectively with pets and children; deal with non-acceptables' life styles; maintain resident discipline; maintain acceptable community environment; carry out eviction procedure; co-ordinate suite turnover; complete incoming and outgoing inspection reports; work within scope of condominium to protect owners investment; advise Board of Directors of condominiums; take direction from Board of Directors; liase with Landlord and Tenant Advisory Bureau; mediate resident-to-resident relations.

RSCH300 Research & Survey-Course Projects

Research and survey projects, Semester I. (32 hours)

RSCH350 Research and Survey

RSCH351 Research & Survey-Course Projects

Research and survey projects, Semester II — with advisor's approval. (32 hours)

SAN100 Sanitation and Hygiene

Cause and prevention of food-borne illnesses, sanitary maintenance of all areas of food service establishments. The student is instructed in the proper handling of food, sanitation through proper dishwashing equipment.

SBM132 Small Business Management I

Business mathematics; basic bookkeeping: journals, ledgers, financial statements, entries, special journals, business organization; business law; sales and advertising. (64 hours)

SBM132B Small Business Management — Watchmakers

Business mathematics — basic bookkeeping.

SBM132C Small Business management — Watchmakers

Small business management for watchmakers.

SBM132D Small Business Man. for Jewellry Repairs

SBM142 Small Business Management II

Small business management for jewellers — Semester II. (48 hours)

SBM200 Small Business Management

During this series of lectures, the student will discuss the practical aspects and concerns of running the small business. Emphasis will be placed on problem-solving. Forms of business ownership, contracts, legal agreements, money, sales, custody of property, insurance, taxation, interest and discount will be discussed. A practicum in basic bookkeeping is incorporated into the course. (64 hours)

SEC100 Security

To inform the student on the legal implications of, and the techniques to protect the safety and security of the hospitality operation, its guests and its property. Develops sound identification, surveillance, control, and awareness programs and policies, establishes reporting forms, key control procedures, emergency procedures using available tools and utilizing police and law enforcement agencies.

SEC111 Security and Safety

Includes analysis of the need for security and fire prevention, burglar alarms, smoke detectors and an understanding of the responsibility of the landlord and resident in providing a safe and secure environment for all residents.

SEW141 Sewing Machine Operation — Flatbed, Serger

Prerequisite: instructor's evaluation.

Single-needle lock stitch flat-bed machine. Part 1 of a 240-hour performance objective program (part 2 is SEW 151) leading to speed, stamina and rhythm in sewing on professional machine.

SEW141A Sewing Machine Operation — Flatbed, Serger

Single-needle lock stick flat-bed machine. Part

1 of a 240-hour performance objective program (part 2 is SEW 151) leading to speed, stamina and rhythm in sewing on professional machine.

SEW143 Blind Stitch, Buttonhole and Sewing Machines

Special module as for SEW 142. (32 Hrs.)

SEW241 Apparel Plant Supplies

As DRES 248 for factory supplies, threads, equipment, accessories, justification of purchases. (64 Hrs.)

SEW242 Sewing Machine — Attachments

Special operations using sewing machines — special attachments for specific objectives. (32 Hrs.)

SEW242A Sewing Machine Attachments

SEW244 Special Machines, Cutting, Etc.

Cutting fabric for easiest sewing — markers, layout, notching, ticketing, ironing, etc. (80 Hrs.)

SEW245 Sewing Machines: Methods

Methods and time studies on sewing machine operators. (16 Hrs.)

SEW252A Special Sewing Machines

Special sewing machine concepts of numerical control applied to sewing machines.

SH100 Shorthand Pitman or Machine

In this semester the theory of the system is thoroughly covered and a good foundation is laid for the development of speed in the following semesters.

SH101 Shorthand Pitman or Machine

This semester is mainly devoted to developing the technique of taking dictation at speeds of up to 100 wpm and transcribing it in mailable form.

SH102 Stenomask & Transcription

SH103 Stenomask & Transcription

SH200 Shorthand

These two semesters continue developing the ability to write shorthand at increasing speeds, up to 130 wpm and transcribing the material in mailable form.

SH201 Applied Stenography

These two semesters continue developing the ability to write shorthand at increasing speeds, up to 130 wpm and transcribing the material in mailable form.

SH202 Legal Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in a legal office, at an acceptable writing speed.

SH203 Legal Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in a legal office, at an acceptable writing speed.

SH204 Medical Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in the medical profession, at an acceptable writing speed.

SH205 Medical Shorthand

Particular emphasis is placed on developing the ability of the writer to handle the kind of terminology that is likely to be encountered in the medical profession, at an acceptable writing speed.

SH402 Shorthand & Transcription Pitman or Machine

SH403 Shorthand & Transcription Pitman or Machine

SOC101 Sociology

This introductory course focuses on basic concepts and methodology of sociology, and their application in various social situations. The social institutions dealt with include the family, religion, education, and the health care system. The student will gain an understanding of the diversity and complexity of some social relationships.

SOC106 Introductory Sociology

A brief survey course to provide the students with a basic understanding of social structure and some skills in applying this knowledge to day care situations.

SOC107 Sociology

A survey of the field of sociology; culture and society, institutions, organizations, ecology and population, disorganization and deviant behaviour, ethnic communities and other aspects of group living.

SOC108 Comparative Sociology

Significant conceptual models in sociology and their application to society will be studied.

SOC171 Introductory Sociology

Readings and discussion of the basic concepts in sociology will be used in analyzing various aspects of Canadian society in intergroup relations, rural and urban communities social classes and social institutions.

SOC201 Interpersonal Relations

This course focuses on assisting the student to develop an increased awareness of 'self' through a study of various normal interactional patterns found in human relationships. As well, a number of deviations from normal behavior patterns will be looked at from a sociological perspective. (45 Hrs.)

SOC202 Living with Dying

This course focuses on assisting the student to look at both her own death and that of others from an emotional as well as an intellectual perspective. Opportunities will be provided for the students to develop their skills in working with dying patients and their families.

SOC203 Family and Kinship

Kinship and family structure in contemporary society is analysed. Focus is in two areas:
- the relationship between economic structure, social class and familial structure.
- the 'politics' of the family, with major themes being the relations between men and women, relations between generations and the internal processes of the family group. (45 Hrs.)

SOC207 Sociology

Sociology of institutions. Special emphasis on the functions of the family as it is understood in various ethnic communities, the changing role of the family. The sociology of deviant behaviour.

SOR401 Safe Practice

Focuses on the legal and organization practices and on the application of principles of physics and asepsis that are essential to provide a safe environment for the patient undergoing surgery.

STR122 Structural Detailing

The preparation of design and detail drawings of standard structural steel reinforced concrete and timer construction.

STR123 Structural Design

Reinforced concrete design; foundations and retaining walls; structural steel design; structural members and frames; detail parts and connections.

STR212 Structural Steel Design and Detailing

Drafting office routines, shop practice, detailing and related design of the components of steel construction.

STR213 Reinforced Concrete Design and Detailing

Drafting office routines, shop practice, detailing and related design of the components of reinforced concrete construction.

STR214 Project Drawing

Project drawing from design sketches; specifications and standards to develop complete sets of design; detail and structural drawings.

SURG300 Orthopedic Surgery — Lecture

This course will give exposure to the student to surgical techniques in amputation and orthopaedic procedures requiring O/P management. The clinic structure and the roles of its professional members will be discussed. Prescription and hopital chart writing will play a role, and when possible, visits to hospitals to view amputation and other surgery. (16 Hrs.)

SURV100 Survey Computation and Drafting I

Ontario land system, survey calculations, interpretation of legal boundary notes.

SURV100T Survey Computations and Drafting

Introduction to elements of surveying and survey drawing, Ontario land systems, survey calculations and interpretation of legal boundary notes.

SURV101 Plane Surveying

Fundamental principles of surveying and the use of survey instruments and equipment, field procedures for topographical surveying and basic construction layout.

SURV101T Plane Surveying

Fundamental principles of surveying and the use of survey instruments and equipment, the field procedures for topographical surveying and basic construction layout.

SURV102 Quantity Surveying I

Estimating of quantities of materials for simple structures including excavating, concrete, masonry, framing, and finishing materials.

SURV103 Quantity Surveying & Estimating

Method of measurement and preparation of estimates for domestic buildings.

SURV104 Plane Surveying

SURV106 Survey Computation

SURV107 Survey Drafting

SURV110 Surveying

A basic course in the fundamentals of plane surveying, utilizing the various survey instruments and equipment.

SURV200 Survey Computations II

Survey plans and calculations for land exchange, easement, expropriations, route locations and earthwork quantities.

SURV200T Survey Computations and Drafting

Survey plans and calculations for land exchange, easement, expropriations, route locations and earthwork quantities.

SURV201 Advanced Plane Surveying

The field work and equipment required to produce good quality 3rd order control over a large area, using geodetic co-ordinates; the adjustment and computation of the results by regular methods and by computer; the drafting of the final plan.

SURV201T Advanced Plane Surveying

The field work and equipment required to produce a good quality 3rd order, control over a large area using geodetic co-ordinates; the adjustment and computation of the results by regular methods and by computer; the drafting of the final plan.

SURV202 Photogrammetry

Theory and photogrammetric mapping, use of aerial photographs in surveying, mapping procedures.

SURV203 Practical Astronomy

Polaris observation for Meridian, determination by astronomic observation of longitude, time latitude, sun observation, use of tables, calculation procedures.

SURV204 Legal Surveying

History and development of land registration system, methods of registering, legal transfers and general procedures, field trips to registry, land titles, and township offices.

SURV205 Quantity Surveying & Estimating

Advanced method of measurement and preparation of estimates for building works including preparation of estimate and price build-up.

SURV206 Elementary Surveying — Theory

A basic course in the fundamentals of plane surveying, utilizing the various survey instruments and equipment.

SURV207 Elementary Surveying — Legal

Introduction to Ontario land systems. Survey drawing and calculations. Interpretation of legal boundary notes.

SURV208 Advanced Plane Surveying

SURV209 Spherical Trignometry & Astronomy

SURV300T Cartography

The compilation of all survey information for

the preparation of producing the printed map on the various media.

SURV301T Advance Plane Surveying

Special problems encountered in field and equipment pertaining to geodetic and urban control surveys. Utilizing conventional and electro equipment.

SURV302T Photogrammetry

The production of plans and maps using air-photo equipment.

SURV303T Practical Astronomy

Calculating of latitude, time, longitude from stellar, observations, accurate calculation of bearings, transformation and relationship of co-ordinate systems, bearing reference and convergence.

SURV304T Legal Surveying

The various types of official surveys in Ontario under The Survey Act, common law principles pertaining to boundaries and surveys.

TD100 Metrology

Basic instrumentation, dial gauges and test indicators, surface plates, micrometers and verniers, gauge blocks, optical instruments and testing. Surface finish screw threads, gears, angular measurement, fixed guages, air gauging, autometrology, co-ordinate measurement.

THEA100 Acting I

Introduction to the art of acting: self-awareness, expressing the personality, relaxing and sensitivity exercises, improvisation, scene analysis, text adaptations, speech and movement.

THEA101 Acting II

Development of the actor's art: drawing together movement, voice and speech in practise performance exercises.

THEA102 Dance I

Introduction to dance: basic ballet, physical development exercises, body awareness.

THEA103 Movement & Mime

Introduction to movement as communication: improvisation, mime, basic stage gymnastics.

THEA104 Voice & Speech I

Introduction to the art of voice and speech: breath control exercises, word formation, pronunciation, voice projection, voice modulation and expression.

THEA105 Technical Studies I

Video, sound, projection: operation of projectors, tape and record players, camera and video, lights, amplifiers and microphones.

THEA106 Music I (Vocal)

Introduction to basic music theory, sight reading, pitch, breath control, range development, theatre and film.

THEA107 Play & Script Study

Reading and analysis of typical short plays and scripts; appreciation of drama and characterization. Stage and film; commercial use of theatrical arts.

THEA108 Costume

Theory, history and design of costumes; costume cutting and making; sewing, embel-

ishment; wardrobe operation, care and maintenance; materials and fabrics.

THEA109 Make-up

Theory and practise of facial make-up for stage and camera.

THEA110 Set Design & Construction

Theory and practise of design, basic drafting; set construction, carpentry, painting; basic lighting design.

THEA111 Voice & Speech II

Further development of voice quality, projection, modulation and range.

THEA112 Production I

A fully rehearsed production, involving simple set, costumes, props, lighting and other basic production values, to give the students performance exposure before an audience.

THEA113 Music II Vocal

Development of voice, singing techniques and vocal harmony.

THEA114 Technical Studies II

An "internship" setting study of basic elements of production for stage, such as wardrobe, sets, props and lighting; theatre management; stage management.

THEA115 Dance II

Further development of ballet and introduction to modern jazz.

THEA200 Acting III

Concentrated work on developing to an advanced level the principles of acting such as study of text, characterization, interaction, emotional exploration, tempo, ensemble playing.

THEA201 Directing

Theory and practise of directing for stage and camera. Camera and radio microphone.

THEA202 TV Production & Performance

Acting, movement and speech, and dramatic performance production before camera for TV and film, including "internship" experience with a professional producing TV company.

THEA203 Dance III

Continuation of disciplines of Dance I and Dance II and introduction of physical kinetics and tap dancing.

THEA204 Voice & Speech III

Further development of the speaking voice for tone, resonance, increased range, clarity of diction.

THEA205 Radio Technique

An introduction to techniques and basic principles of acting before the radio microphone, theory and practise of radio studio and control booth techniques.

THEA206 Music III Vocal

Further development of the singing voice with emphasis on individual style and solo performance.

THEA207 Professionalism I

Career development and management; casting; resumes and agents; contracts and unions; preparation for auditions.

THEA208 Production II

A fully rehearsed performance with music and dance and basic production elements related to musical comedy before an audience.

THEA209 Professionalism II

THEA210 Voice & Speech II

Further development of the speaking voice, expression of emotion, age, accents and dialects.

THEA211 Music IV Vocal

Further development of solo performance and choral harmony.

THEA212 Dance IV

Emphasis on individual techniques related to the needs of musical theatre.

THEA213 Production III (Performance)

Rehearsal and presentation of a "show-case" stage production in the environment of professional theatre.

THEA214 Production IV (Performance)

Rehearsal and presentation of a stage performance, co-relating the production elements learned during the 2 year program and as a "show-case" for the students completing the second year of their training.

THEA215 Stage Management

Theory and practise of stage management.

THEA216 Performance Production

Practical performance activities in two, final semester show-case performances.

TYP152 Advanced Typing

URB100 Urban Studies

Students will learn Planning Act, subdivision control contributing cost to development; municipal liaison; social housing management practices.

WACH126 Balance Work

WACH126B Balance Work

Balance wheels and systems.

WACH127 Hairspring Manipulation

WACH127A Hairspring Manipulation

Hairsprings — how to select, install, adjust, etc.

WACH127B Hairspring Manipulation

Hairsprings — how to use, install, adjust, etc. Semester 2.

WACH128 Filing

WACH128A Filing

Filing skills in fine work. File a stem square with a tolerance of 8 .02mm. Includes all operations.

WACH128B Filing

WACH129 Lathe Operations

WACH129A Lathe Operations

Operating a jeweller's lathe.

WACH129B Lathe Operations

Make a balance staff for a pocket watch in tempered steel to a tolerance of 8 .01mm. Operating a jeweller's lathe.

WACH131 Watchmaking Theory

Care and use of basic tools, screw plate exercises, basic turning exercises, files and filing techniques, turning in brass and steel, making balance staffs. (95 Hrs.)

WACH131A Watchmaking Theory

Care and use of basic tools, screw plate exercises, basic turning exercises, files and filing techniques, turning in brass and steel, making balance staffs. (95 Hrs.)

WACH131B Watchmaking Skills

Grind and polish tempered steel, make clock bushings, repivot wheels, fit broken teeth on clock wheels, refinish mainspring ends and other skills necessary to overhaul clocks.

WACH224 Watch Overhaul

Procedure properly to disassemble, clean, assemble, lubricate and adjust mechanical watches.

WACH225 Escapement Matching

Completely examine and make corrections on the Swiss lever escapement.

WACH227 Balance & Hairspring Manipulation

Calculate, collet, true, vibrate and form a theoretically correct overcoil hairspring for a pocket watch.

WACH227A Balance and Hairspring Manipulation

Advanced instruction to WACH 127B.

WACH227B Balance & Hairspring Manipulation

For a man's wrist watch.

WACH231 Watchmaking Skills

Advanced turning operations, alterations and fitting of parts. Jewelling: bezel type and friction type. Escapement matching, hairspring manipulation, colleting, truing, vibrating and overcoiling of watch hairsprings. (133 Hrs.)

WACH231A Watchmaking Skills

Advanced turning operations, alterations and fitting of parts. Jewelling: bezel type and friction type, escapement matching, hairspring manipulation, colleting, truing, vibrating and overcoiling of watch hairsprings. (133 Hrs.)

WACH231B Watchmaking Skills

Select and replace watch jewels, balance staffs, stems, crowns, mainsprings, hands, crystals, gaskets and other watch parts. He will also learn to burnish balance pivots and train wheel pivots, replace pallet arbors, adjust end shakes, close holes, tighten cannon pinions and other skills necessary to overhaul a mechanical watch.

WACH232 Theory of Watchmaking

Gearing theory and calculations, theory of watch construction, watch timing and adjusting, automatic winding mechanisms, calendar mechanisms, other types of watch escapements, waterproofing. (95 Hrs.)

WACH232A Theory of Watchmaking

Gearing theory and calculations, thoery of watch construction, watch timing and adjusting, automatic winding mechanisms, calendar mechanisms, other types of watch escapements, waterproofing. (95 Hrs.)

WACH232B Theory of Watchmaking

Continuation of WACH 232A.

WACH324 Chronograph Overhaul & Adjustment

Disassemble, clean assemble and adjust the following chronograph mechanisms: chronograph without collum wheel, 30 minute recording; chronograph with collum wheel, 30 minute recording; chronograph with rocking pinion, 30 minute recording; hour recording chronograph of any type; split-second chronograph; automatic winding, hour recording, split-second, day-date chronograph.

WACH330 Horology Theory

Principles of precision adjustments of chronometres, detent escapements, helical balance springs, complete phase calendar mechanisms, perpetual calendar watches. (247 Hrs.)

WACH330B Horology Theory

Theory of construction and principles of operation of chronograph mechanisms described under WACH 324. He will also learn the theory of construction and the principles of operation of electric and electronic watches with balance type, tuning fork and quartz crystal oscillators with analogue type, liquid crystal type and light emitting diode type display systems.

WACH331 Lathe Operations

General overhauling of perpetual calendar and other types of complicated watches. (57 Hrs.)

WACH331A Lathe Operations

General overhauling techniques, precision watch timing and adjusting, overhauling of perpetual calendar and other types of complicated watches. (57 Hrs.)

WACH331B Lathe Operations

Continuation of WACH 331A.

WACH334 Watch Overhaul & Adjusting – Trouble-shooting

Service and adjust all types of mechanical watches of standard winding and automatic winding systems. The emphasis will be placed on precision adjustments.

WACH334A Watch Overhaul and Adjustment

Overhaul watches, advanced segment.

WACH334B Watch Overhaul

Electronic watch servicing trouble-shoot and completely service the electric and electronic watches described under WACH 330B. He will also learn to use the electronic equipment designed for servicing electronic watches.

ACH335 Applied Electronics

chotomy of electronic watches; electron the-y; Ohm's law; colour code; series and parallel sistors; batteries; magnetism; electromagne-m; capacitance; I-c circuits; quartz crystals; odes, transistors; F.E.T.'s liquid crystal cir-its as used in watch design; modules and I.C. cuits. (57 Hrs.)

ACH335A Applied Electronics

chotomy of electronic watches; electron the-y, Ohm's law; colour code; series and parallel sistors; batteries; magnetism; electro mag-tism, capacitance; I-c circuits; quartz crys-s; diodes, transistors; F.E.T.'s liquid crystal cuits as used in watch design; modules and .C. circuits. (57 Hrs.)

ACH335B Applied Electronics

ntinuation of WACH 335A.

ACH336 Electronic Watch Servicing

me as WACH 334 but on a more advanced el with finer tolerances required.

ELD100 Shielded Metal Arc & Oxy-acetylene Welding

ther study of manual oxy-acetylene and ielded metal arc welding processes and their plication to the welding of sheets, plate, pipe d structural sections. Welding techniques as plied to the welding of pressure vessels and ping as well as consturction welding. Related etallurgy.

ELD101 Gas Tungsten Arc Welding

escription, characteristics, and application of T.A. welding and auxiliary equipment and pplies. Preparation procedures and welding chniques as applied to various metals. Joint sign, purging procedures, operational dif-ulties and their solutions.

WELD102 Gas Metal Arc Fluxed Cored & Submerged Arc

Theory and application of semi-automatic and automatic versions of gas metal arc welding — short circuiting, flux-cored and spray arc processes. Theory and application of submerged arc and electroslag welding processes. Study of equipment requirements and selection. Operational trouble-shooting and equipment maintenance. Selection of filler wires and shielding gases. Welding procedures and weld testing.

WELD103 Shop & Laboratory Procedures

Theory of fabrication procedures involving the use of various types of welding and metalworking equipment. Application of manual, semi-automatic and automatic welding processes to production. Theory and industrial application of resistance. Pulsed arc, stud, thermit and atomic hydrogen welding processes. Oxy-fuel gas and plasma arc cutting processes. Process and equipment selection. Quality control and codes, estimating. Shop and production planning. Use of weld inspection equipment to perform destructive and non-destructive tests. Supervision.

WELD147 Welding Techniques

Safety precautions, handling and using oxy-acetylene equipment, welding terminology, assembly and disassembly of equipment, flame adjustment, definitions of various oxy-acetylene processes, basic weld joints, fusion welding of various metals, theory of oxy-acetylene cutting, brazing and braze welding, soldering methods: equipment and materials, general procedures, torch soldering, soldering with copper and electric soldering irons and guns.

WELD149 Welding Brazing & Cutting

Theory: safety precautions, terminology, assembly and disassembly of equipment, care of equipment, types of flames and their uses, joint design, weld faults, repair of casting, handling of oxygen and acetylene. Testing of welds and operators. Practice: Fusion welding and braze welding. Cutting with manual and semi-automatic equipment.

The George Brown College
of Applied Arts and Technology
P.O. Box 1015, Station B, Toronto, Ontario, M5T 2T9 (416) 967-1212